

10/718,532

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:ssspta1204bxd

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

\* \* \* \* \* Welcome to STN International \* \* \* \* \*

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America  
NEWS 2 "Ask CAS" for self-help around the clock  
NEWS 3 SEP 01 New pricing for the Save Answers for SciFinder Wizard within  
STN Express with Discover!  
NEWS 4 OCT 28 KOREAPAT now available on STN  
NEWS 5 NOV 30 PHAR reloaded with additional data  
NEWS 6 DEC 01 LISA now available on STN  
NEWS 7 DEC 09 12 databases to be removed from STN on December 31, 2004  
NEWS 8 DEC 15 MEDLINE update schedule for December 2004  
NEWS 9 DEC 17 ELCOM reloaded; updating to resume; current-awareness  
alerts (SDIs) affected  
NEWS 10 DEC 17 COMPUAB reloaded; updating to resume; current-awareness  
alerts (SDIs) affected  
NEWS 11 DEC 17 SOLIDSTATE reloaded; updating to resume; current-awareness  
alerts (SDIs) affected  
NEWS 12 DEC 17 CERAB reloaded; updating to resume; current-awareness  
alerts (SDIs) affected  
NEWS 13 DEC 17 THREE NEW FIELDS ADDED TO IFIPAT/IFIUDB/IFICDB  
NEWS 14 DEC 30 EPFULL: New patent full text database to be available on STN  
NEWS 15 DEC 30 CAPLUS - PATENT COVERAGE EXPANDED  
NEWS 16 JAN 03 No connect-hour charges in EPFULL during January and  
February 2005  
NEWS 17 JAN 11 CA/CAPLUS - Expanded patent coverage to include Russia  
(Federal Institute of Industrial Property)  
  
NEWS EXPRESS JANUARY 10 CURRENT WINDOWS VERSION IS V7.01a, CURRENT  
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
AND CURRENT DISCOVER FILE IS DATED 10 JANUARY 2005  
  
NEWS HOURS STN Operating Hours Plus Help Desk Availability  
NEWS INTER General Internet Information  
NEWS LOGIN Welcome Banner and News Items  
NEWS PHONE Direct Dial and Telecommunication Network Access to STN  
NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that  
specific topic.

All use of STN is subject to the provisions of the STN Customer  
agreement. Please note that this agreement limits use to scientific  
research. Use for software development or design or implementation  
of commercial gateways or other similar uses is prohibited and may  
result in loss of user privileges and other penalties.

\* \* \* \* \* STN Columbus \* \* \* \* \*

FILE 'HOME' ENTERED AT 19:20:11 ON 12 JAN 2005

=> fil reg

COST IN U.S. DOLLARS

SINCE FILE

ENTRY

TOTAL

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'REGISTRY' ENTERED AT 19:20:22 ON 12 JAN 2005

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2005 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 10 JAN 2005 HIGHEST RN 811411-12-8

DICTIONARY FILE UPDATES: 10 JAN 2005 HIGHEST RN 811411-12-8

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:

<http://www.cas.org/ONLINE/DBSS/registryss.html>

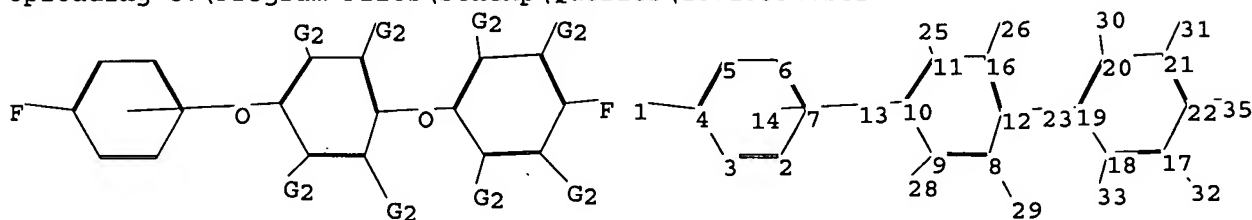
=> d query

NO L# DEFINED

There are no L# queries, structures, or screen sets defined in the current session.

=>

Uploading C:\Program Files\Stnexp\Queries\10718532.str



chain nodes :

1 13 23 25 26 28 29 30 31 32 33 35

ring nodes :

2 3 4 5 6 7 8 9 10 11 12 16 17 18 19 20 21 22

chain bonds :

1-4 8-29 9-28 10-13 11-25 12-23 16-26 17-32 18-33 19-23 20-30 21-31 22-35

ring bonds :

2-3 2-7 3-4 4-5 5-6 6-7 8-9 8-12 9-10 10-11 11-16 12-16 17-18 17-22 18-19 19-20 20-21 21-22

exact/norm bonds :

8-29 9-28 10-13 11-25 12-23 16-26 17-32 18-33 19-23 20-30 21-31

exact bonds :

1-4 22-35

normalized bonds :

2-3 2-7 3-4 4-5 5-6 6-7 8-9 8-12 9-10 10-11 11-16 12-16 17-18 17-22  
18-19 19-20 20-21 21-22

G1:N,X

G2:X,Ak,H

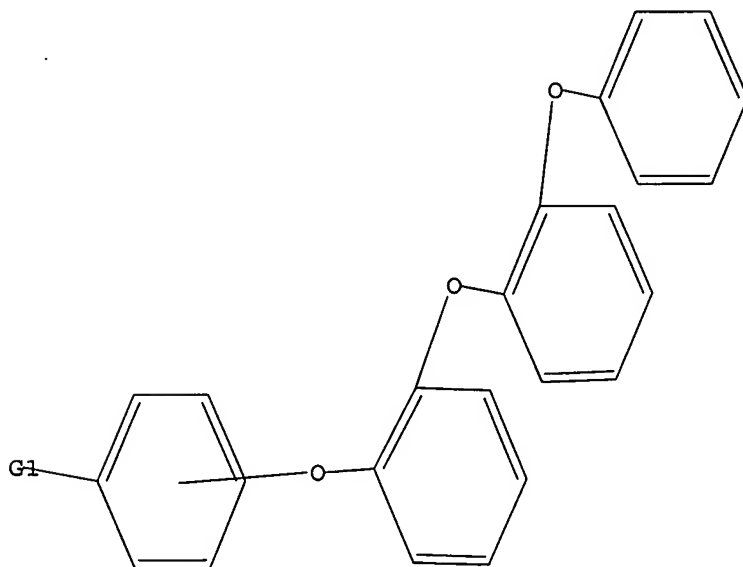
Match level :

1:CLASS 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom  
11:Atom 12:Atom 13:CLASS 14:CLASS 16:CLASS 17:Atom 18:Atom 19:Atom 20:Atom  
21:Atom 22:Atom 23:CLASS 25:CLASS 26:CLASS 28:CLASS 29:CLASS 30:CLASS  
31:CLASS 32:CLASS 33:CLASS 35:CLASS

L1 STRUCTURE UPLOADED

=> d query

L1 STR



G1 N,X

Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 19:20:48 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 2418 TO ITERATE

41.4% PROCESSED 1000 ITERATIONS  
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 45411 TO 51309

PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s l1 full

FULL SEARCH INITIATED 19:20:51 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 48758 TO ITERATE

100.0% PROCESSED 48758 ITERATIONS

2 ANSWERS

SEARCH TIME: 00.00.01

L3 2 SEA SSS FUL L1

=> fil caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

161.33

161.54

FILE 'CAPLUS' ENTERED AT 19:20:55 ON 12 JAN 2005

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 12 Jan 2005 VOL 142 ISS 3

FILE LAST UPDATED: 11 Jan 2005 (20050111/ED)

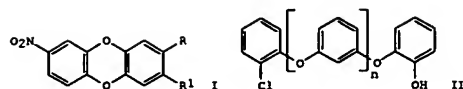
This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l3

L4 1 L3

=> d l4 abs ibib hitstr





AB Self-condensation (150°, DMF) of KOC6H3BrNO2-2,5 gave a mixture of the dioxins I (R = R1 = H, NO2) via Smiles rearrangement of the intermediate (nitrophenoxy)nitrophenoxide. Smiles rearrangement of other (aryloxy)nitrophenoxides is also reported. An attempted synthesis of trioxonins gave linear products. E.g., thermal condensation of

2-ClC6H4OH (K2CO3, Cu powder, 170-200°, 6 h) gave 11% dibenzo-p-dioxin, 40%

phenol II (n = 1) and 2% II (n = 4).

ACCESSION NUMBER: 1981:603847 CAPLUS

DOCUMENT NUMBER: 95:203847

TITLE: The Smiles rearrangement of 2-aryloxy-5-nitrophenoxides. Attempted routes to benzoxirens and tribenzo[b,e,h]trioxonins

AUTHOR(S): Ramsden, Christopher A.

CORPORATE SOURCE: Sch. Chem. Sci., Univ. East Anglia, Norwich, NR4 7TJ, UK

SOURCE: Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999)

(1981), (9), 2456-63

CODEN: JCPRB4; ISSN: 0300-922X

DOCUMENT TYPE: Journal

LANGUAGE: English

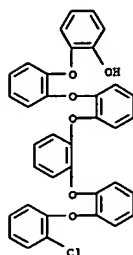
OTHER SOURCE(S): CASREACT 95:203847

IT 79807-69-5P 79807-72-0P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

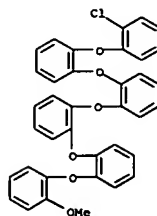
RN 79807-69-5 CAPLUS

CN Phenol, 2-[2-[2-(2-(2-chlorophenoxy)phenoxy)phenoxy]phenoxy]phenoxy]- (9CI) (CA INDEX NAME)



RN 79807-72-0 CAPLUS

CN Benzene, 1-[2-(2-chlorophenoxy)phenoxy]-2-[2-(2-methoxyphenoxy)phenoxy]phenoxy]- (9CI) (CA INDEX NAME)



=> fil reg  
COST IN U.S. DOLLARS

SINCE FILE ENTRY	TOTAL SESSION
5.39	166.93

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE ENTRY	TOTAL SESSION
-0.73	-0.73

CA SUBSCRIBER PRICE

FILE 'REGISTRY' ENTERED AT 19:21:43 ON 12 JAN 2005  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2005 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 10 JAN 2005 HIGHEST RN 811411-12-8  
DICTIONARY FILE UPDATES: 10 JAN 2005 HIGHEST RN 811411-12-8

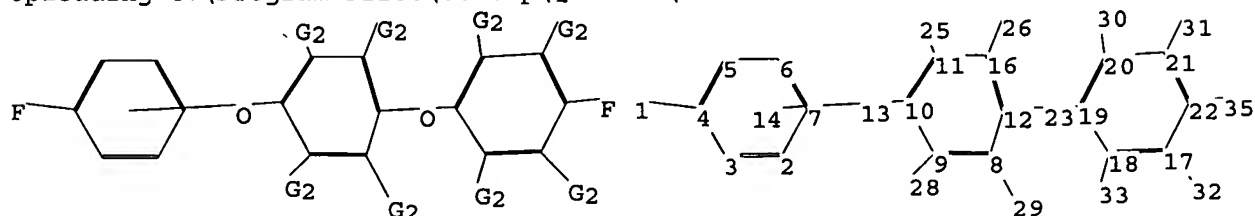
TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>  
Uploading C:\Program Files\Stnexp\Queries\10718532.str



chain nodes :

1 13 23 25 26 28 29 30 31 32 33 35

ring nodes :

2 3 4 5 6 7 8 9 10 11 12 16 17 18 19 20 21 22

chain bonds :

1-4 8-29 9-28 10-13 11-25 12-23 16-26 17-32 18-33 19-23 20-30 21-31  
22-35

ring bonds :

2-3 2-7 3-4 4-5 5-6 6-7 8-9 8-12 9-10 10-11 11-16 12-16 17-18 17-22  
18-19 19-20 20-21 21-22

exact/norm bonds :

8-29 9-28 10-13 11-25 12-23 16-26 17-32 18-33 19-23 20-30 21-31

exact bonds :

1-4 22-35

normalized bonds :

2-3 2-7 3-4 4-5 5-6 6-7 8-9 8-12 9-10 10-11 11-16 12-16 17-18 17-22  
18-19 19-20 20-21 21-22

G1:N,X

G2:X,Ak,H

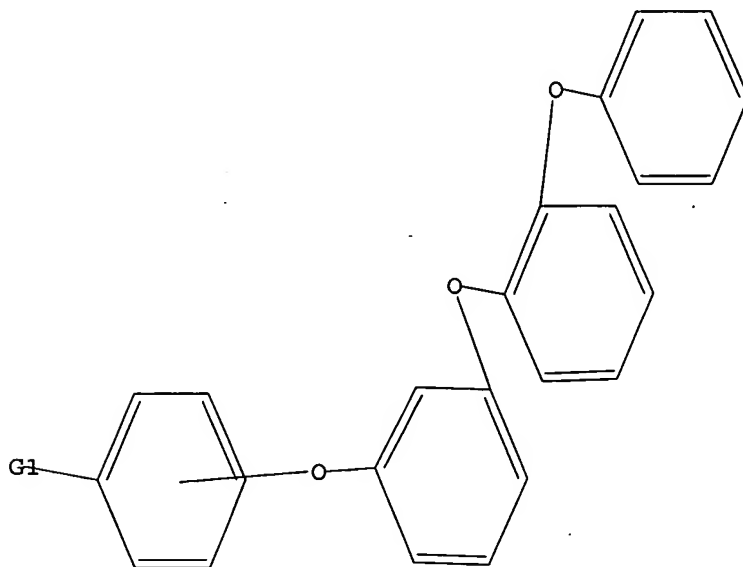
Match level :

1:CLASS 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom  
11:Atom 12:Atom 13:CLASS 14:CLASS 16:CLASS 17:Atom 18:Atom 19:Atom 20:Atom  
21:Atom 22:Atom 23:CLASS 25:CLASS 26:CLASS 28:CLASS 29:CLASS 30:CLASS  
31:CLASS 32:CLASS 33:CLASS 35:CLASS

L5 STRUCTURE UPLOADED

=> d query

L5 STR



G1 N,X

Structure attributes must be viewed using STN Express query preparation.

=> s 15

SAMPLE SEARCH INITIATED 19:22:20 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 5839 TO ITERATE

17.1% PROCESSED 1000 ITERATIONS  
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 112199 TO 121361  
PROJECTED ANSWERS: 0 TO 0

L6 0 SEA SSS SAM L5

=> s 15 full  
FULL SEARCH INITIATED 19:22:24 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 118267 TO ITERATE

100.0% PROCESSED 118267 ITERATIONS 2 ANSWERS  
SEARCH TIME: 00.00.01

L7 2 SEA SSS FUL L5

=> fil caplus		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	161.33	328.26
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-0.73

FILE 'CAPLUS' ENTERED AT 19:22:28 ON 12 JAN 2005  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 12 Jan 2005 VOL 142 ISS 3  
FILE LAST UPDATED: 11 Jan 2005 (20050111/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 17  
L8 0 L7

=> s 17  
L9 0 L7

=> fil reg		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.45	328.71

TOTAL  
SESSION  
-0.73

G1:N,X

G2:X,Ak,H

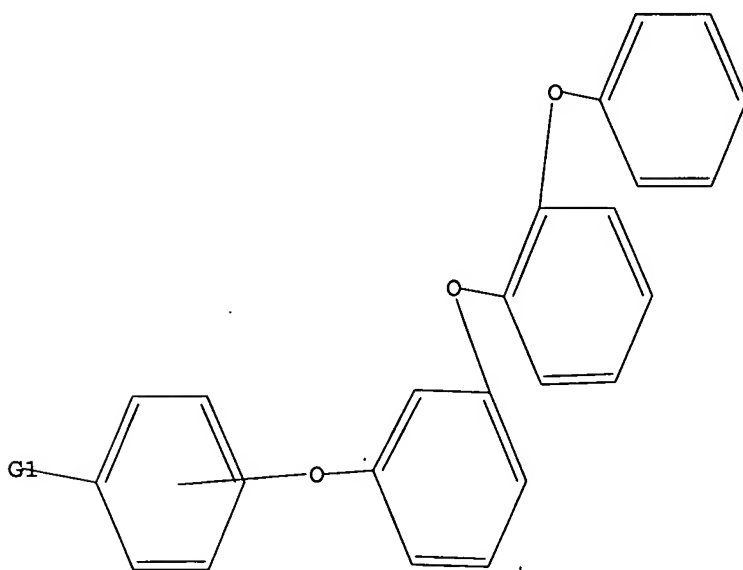
Match level :

1:CLASS 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom  
11:Atom 12:Atom 13:CLASS 14:CLASS 16:CLASS 17:Atom 18:Atom 19:Atom 20:Atom  
21:Atom 22:Atom 23:CLASS 25:CLASS 26:CLASS 28:CLASS 29:CLASS 30:CLASS  
31:CLASS 32:CLASS 33:CLASS 35:CLASS

L10 STRUCTURE UPLOADED

=> d query

L10 STR



G1 N,X

Structure attributes must be viewed using STN Express query preparation.

=> s l10 full

FULL SEARCH INITIATED 19:23:12 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 118267 TO ITERATE

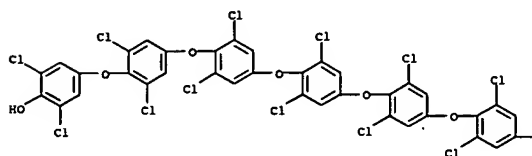
100.0% PROCESSED 118267 ITERATIONS  
SEARCH TIME: 00.00.01

2 ANSWERS

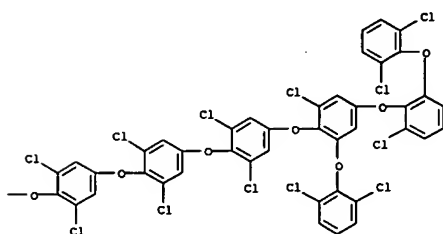
L11 2 SEA SSS FUL L10

=> d l11 1-2

PAGE 1-A



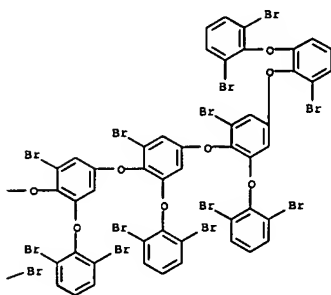
PAGE 1-B



1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L11 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2005 ACS on STN (Continued)

**PAGE 1-B**



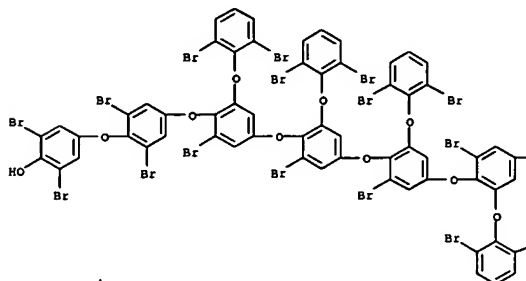
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

```

L11 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2005 ACS on STN
RN 107204-66-0 REGISTRY
CN Phenol, 2,6-dibromo-4-[2,6-dibromo-4-[2-bromo-4-[2-bromo-4-[2-bromo-4-[2-
bromo-4-[2-bromo-4-[2-bromo-4-[2-bromo-4-[2-bromo-6-(2,6-
dibromophenoxy)phenoxy]-6-(2,6-dibromophenoxy)phenoxy]-6-(2,6-
dibromophenoxy)phenoxy]-6-(2,6-dibromophenoxy)phenoxy]-6-(2,6-
dibromophenoxy)phenoxy]-6-(2,6-dibromophenoxy)phenoxy]-6-(2,6-
dibromophenoxy)phenoxy]-6-(2,6-dibromophenoxy)phenoxy]phenyl]- (7C1)
(CA
INDEX NAME}
MF C108 H46 Br28 O18
SR CAOLD
LC STN FILES: CAOLD

```

PAGE 1-A



=> fil caold		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	165.01	493.72
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-0.73

FILE 'CAOLD' ENTERED AT 19:23:44 ON 12 JAN 2005  
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
 COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1907-1966  
 FILE LAST UPDATED: 01 May 1997 (19970501/UP)

This file contains CAS Registry Numbers for easy and accurate substance identification. Title keywords, authors, patent assignees, and patent information, e.g., patent numbers, are now searchable from 1907-1966. TIFF images of CA abstracts printed between 1907-1966 are available in the PAGE display formats.

This file supports REGISTRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

=> s l11  
 L12 1 L11

=> d l12 abs ibib hitstr  
 'ABS' IS NOT A VALID FORMAT FOR FILE 'CAOLD'

The following are valid formats:

ALL ----- AN, TI, AU, PA, DT, IT, PI (default)  
 BIB ----- AN, TI, AU, PA, DT, PI  
 CAN ----- List of CA abstract numbers, no L-number headers  
 CBIB ---- AN, TI, AU, PA, PI  
 DALL ---- ALL, delimited (end of each field identified)  
 IND ----- Indexing data  
 MAX ----- Same as ALL  
 SAM ----- TI, IT  
 SCAN ---- TI, IT (random display, no answer numbers;  
           SCAN must be entered on the same line as the DISPLAY,  
           e.g., D SCAN or DISPLAY SCAN)  
 STD ----- BIB

IALL ---- ALL, indented with text labels  
 IBIB ---- BIB, indented with text labels  
 ISTD ---- STD, indented with text labels

HIT ----- Fields containing hit terms  
 HITIND -- IT  
 HITRN --- HIT RN  
 HITSTR -- HIT RN, its CA index name and its structure diagram  
 FHITSTR - First HIT RN, its CA index name and its structure diagram  
 OCC ----- Number of occurrence of hit term and field in which it occurs



Index Terms (IT) are CAS Registry Numbers; Accession Numbers (AN) CA References.

Index Terms in CAOLD include only Registry Numbers; no subject terms are available. The same formats (except SAMPLE) may be used with the DISPLAY ACC command to display the record for a specified CAOLD Accession Number.

PAGE ---- Page Image of original Chemical Abstracts issue containing the abstract of the answer.

PAGE.PREV and PAGE.NEXT will return the image of the page before or after the current answer.

ENTER DISPLAY FORMAT (ALL):all

L12 ANSWER 1 OF 1 CAOLD COPYRIGHT 2005 ACS on STN  
AN CA60:5373c CAOLD  
TI preparation of halogenated polyoxyphenylenes  
AU Petit, Jean; Laborie-Gardaix, F.  
IT 608-33-3 107204-66-0 107822-04-0

=> d 112 bib

L12 ANSWER 1 OF 1 CADLD COPYRIGHT 2005 ACS on STN  
AN CA60:5373c CADLD  
TI preparation of halogenated polyoxyphenylenes  
AU Petit, Jean; Laborie-Gardaix, F.

=> fil reg		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	2.14	495.86
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-0.73

FILE 'REGISTRY' ENTERED AT 19:24:58 ON 12 JAN 2005  
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
 COPYRIGHT (C) 2005 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file  
 provided by InfoChem.

STRUCTURE FILE UPDATES: 10 JAN 2005 HIGHEST RN 811411-12-8  
 DICTIONARY FILE UPDATES: 10 JAN 2005 HIGHEST RN 811411-12-8

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when  
 conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more  
 information enter HELP PROP at an arrow prompt in the file or refer  
 to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> fil reg		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.86	496.72
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-0.73

FILE 'REGISTRY' ENTERED AT 19:26:23 ON 12 JAN 2005  
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
 COPYRIGHT (C) 2005 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file  
 provided by InfoChem.

STRUCTURE FILE UPDATES: 10 JAN 2005 HIGHEST RN 811411-12-8  
 DICTIONARY FILE UPDATES: 10 JAN 2005 HIGHEST RN 811411-12-8

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

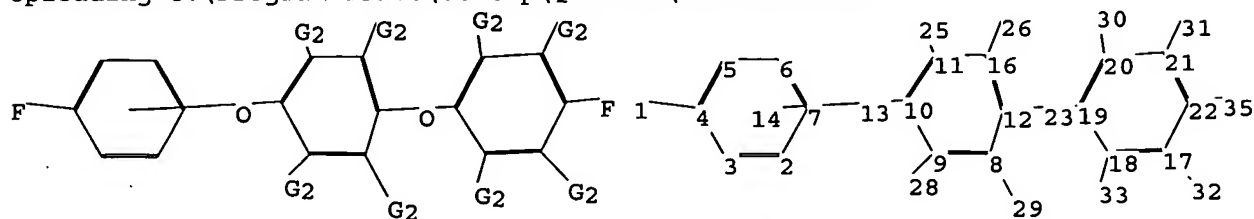
Please note that search-term pricing does apply when  
 conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>

Uploading C:\Program Files\Stnexp\Queries\10718532.str



chain nodes :

1 13 23 25 26 28 29 30 31 32 33 35

ring nodes :

2 3 4 5 6 7 8 9 10 11 12 16 17 18 19 20 21 22

chain bonds :

1-4 8-29 9-28 10-13 11-25 12-23 16-26 17-32 18-33 19-23 20-30 21-31 22-35

ring bonds :

2-3 2-7 3-4 4-5 5-6 6-7 8-9 8-12 9-10 10-11 11-16 12-16 17-18 17-22 18-19 19-20 20-21 21-22

exact/norm bonds :

8-29 9-28 10-13 11-25 12-23 16-26 17-32 18-33 19-23 20-30 21-31

exact bonds :

1-4 22-35

normalized bonds :

2-3 2-7 3-4 4-5 5-6 6-7 8-9 8-12 9-10 10-11 11-16 12-16 17-18 17-22 18-19 19-20 20-21 21-22

G1:N,X

G2:X,Ak,H

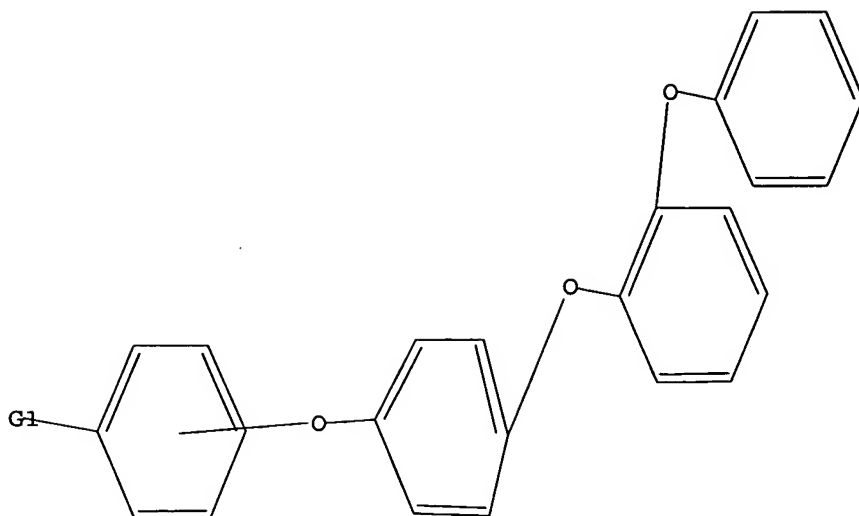
Match level :

1:CLASS 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom  
 11:Atom 12:Atom 13:CLASS 14:CLASS 16:CLASS 17:Atom 18:Atom 19:Atom 20:Atom  
 21:Atom 22:Atom 23:CLASS 25:CLASS 26:CLASS 28:CLASS 29:CLASS 30:CLASS  
 31:CLASS 32:CLASS 33:CLASS 35:CLASS

L13 STRUCTURE UPLOADED

=> d query

L13 STR



G1 N,X

Structure attributes must be viewed using STN Express query preparation.

=> s l13

SAMPLE SEARCH INITIATED 19:26:47 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 5834 TO ITERATE

17.1% PROCESSED 1000 ITERATIONS  
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 112101 TO 121259  
PROJECTED ANSWERS: 0 TO 0

L14 0 SEA SSS SAM L13

=> s l13 full

FULL SEARCH INITIATED 19:26:53 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 117527 TO ITERATE

100.0% PROCESSED 117527 ITERATIONS  
SEARCH TIME: 00.00.01

6 ANSWERS

L15 6 SEA SSS FUL L13

=> fil caplus

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
161.33	658.05

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
0.00	-0.73

CA SUBSCRIBER PRICE

FILE 'CAPLUS' ENTERED AT 19:26:57 ON 12 JAN 2005  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 12 Jan 2005 VOL 142 ISS 3  
FILE LAST UPDATED: 11 Jan 2005 (20050111/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l15

L16            2 L15

=> d l16 1-2 abs ibib hitstr



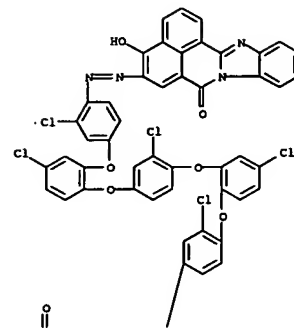
\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The title photoreceptors comprise a conductive support coated with a photosensitive layer containing a bisazo compound I (K1, K2 = OH-containing coupler residue having a group with coupling ability, 1 of K1 and K2 is II (Y = divalent N-contg heterocycle which may be substituted, divalent aromatic hydrocarbon which may be substituted); X = divalent group having 22 groups selected from III and IV; R1, R2 = H, halo, (substituted) alkyl, (substituted) alkoxy, (substituted) aryl; the benzene rings A, B, and C may have substituents). The photoreceptors show high photosensitivity and good durability in repeated use. Thus, an Al vapor-deposited polyester film was coated with a charge-generating layer containing V and with a charge-transporting layer containing a hydratone compound to give a photoreceptor.

ACCESSION NUMBER: 1995:849478 CAPLUS  
DOCUMENT NUMBER: 124:215963  
TITLE: Electrophotographic photoreceptors using novel bisazo compound  
INVENTOR(S): Rin, Mamoru; Tanaka, Noriko  
PATENT ASSIGNEE(S): Mitsubishi Kagaku KK, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKOQAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

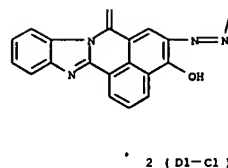
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07168378	A2	19950704	JP 1993-316552	19931216
PRIORITY APPLN. INFO.:			JP 1993-316552	19931216

IT 170969-23-0  
RL: DEV (Device component use); USES (Uses)  
(electrophotog. photoreceptor containing bisazo compound as charge-generating agent)  
RN 170969-23-0 CAPLUS  
CN 7H-Benzimidazo[2,1-a]benz[de]isoquinolin-7-one, 9-(10-, 11 or 12)-chloro-5-[(2-chloro-4-[4-chloro-2-(2-chloro-4-[4-chloro-2-(3-chloro-4-[(9-(10-, 11 or 12)-chloro-4-hydroxy-7-oxo-7H-benzimidazo[2,1-a]benz[de]isoquinolin-5-yl)azo]phenoxy]phenoxy]phenoxy]phenyl)azo]-4-hydroxy- (9CI) (CA INDEX NAME)



PAGE 1-A

PAGE 2-A



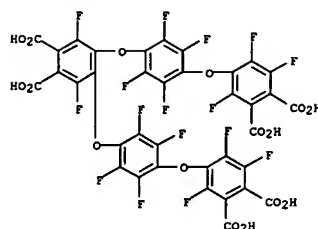
\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Title compds. 1, useful as material for hardeners for fluorinated epoxy resins (no date), is prepared via II (R = cyano, CO2H). Thus, a mixture of tetrafluorophthalonitrile, tetrafluorohydroquinone, and Et3N in DMF was heated at 35° for 30 to give 21% II [R = cyano], which was treated with 60% H2SO4 at 150° for 5 h to give 26% II [R = CO2H], which was refluxed with Ac2O for 2 h to 52% I.

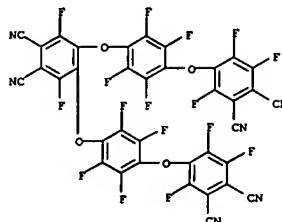
ACCESSION NUMBER: 1994:630662 CAPLUS  
DOCUMENT NUMBER: 121:230662  
TITLE: preparation of a perfluorinated hexacarboxylic acid as material for hardeners for fluorinated epoxy resins  
INVENTOR(S): Sasaki, Shigekuni; Matsura, Tooru; Ando, Shinji  
PATENT ASSIGNEE(S): Nippon Telegraph & Telephone, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
CODEN: JKOQAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06157501	A2	19940603	JP 1992-340986	19921130
PRIORITY APPLN. INFO.:			JP 1992-340986	19921130

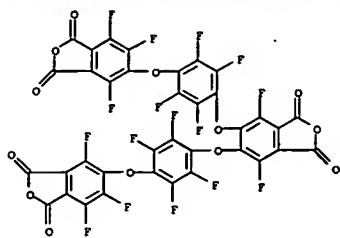
OTHER SOURCE(S): CASREACT 121:230662  
IT 158394-12-8P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and conversion into trianhydride)  
RN 158394-12-8 CAPLUS  
CN 1,2-Benzenedicarboxylic acid, 4,5-bis[4-(3,4-dicarboxy-2,5,6-trifluorophenoxy)-2,3,5,6-tetrafluorophenoxy]-3,6-difluoro- (9CI) (CA INDEX NAME)



IT 158394-11-7P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and hydrolysis of)  
RN 158394-11-7 CAPLUS  
CN 1,2-Benzenedicarbonitrile, 4,5-bis[4-(3,4-dicyano-2,5,6-trifluorophenoxy)-2,3,5,6-tetrafluorophenoxy]-3,6-difluoro- (9CI) (CA INDEX NAME)



IT 158394-13-9P  
RL: IMP (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)  
(preparation of a perfluorinated hexacarboxylic acid as material)  
RN 158394-13-9 CAPLUS  
CN 1,3-Isobenzofurandione, 4,7-difluoro-5,6-bis[2,3,5,6-tetrafluoro-4-[(4,6,7-trifluoro-1,3-dihydro-1,3-dioxo-5-isobenzofuranyl)oxy]phenoxy]- (9CI) (CA INDEX NAME)



=> fil reg  
COST IN U.S. DOLLARS

SINCE FILE ENTRY	TOTAL SESSION
10.33	668.38

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE ENTRY	TOTAL SESSION
-1.46	-2.19

CA SUBSCRIBER PRICE

FILE 'REGISTRY' ENTERED AT 19:27:31 ON 12 JAN 2005  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2005 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 10 JAN 2005 HIGHEST RN 811411-12-8  
DICTIONARY FILE UPDATES: 10 JAN 2005 HIGHEST RN 811411-12-8

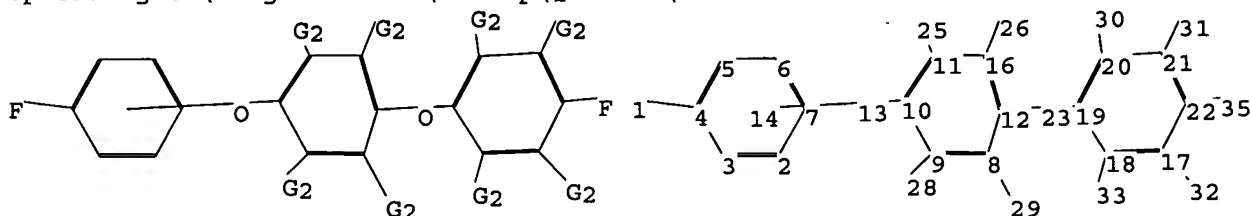
TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>  
Uploading C:\Program Files\Stnexp\Queries\10718532.str



chain nodes :

1 13 23 25 26 28 29 30 31 32 33 35

ring nodes :

2 3 4 5 6 7 8 9 10 11 12 16 17 18 19 20 21 22

chain bonds :

1-4 8-29 9-28 10-13 11-25 12-23 16-26 17-32 18-33 19-23 20-30 21-31 22-35

ring bonds :

2-3 2-7 3-4 4-5 5-6 6-7 8-9 8-12 9-10 10-11 11-16 12-16 17-18 17-22 18-19 19-20 20-21 21-22

exact/norm bonds :

8-29 9-28 10-13 11-25 12-23 16-26 17-32 18-33 19-23 20-30 21-31

exact bonds :

1-4 22-35

normalized bonds :

2-3 2-7 3-4 4-5 5-6 6-7 8-9 8-12 9-10 10-11 11-16 12-16 17-18 17-22  
18-19 19-20 20-21 21-22

G1:N,X

G2:X,Ak,H

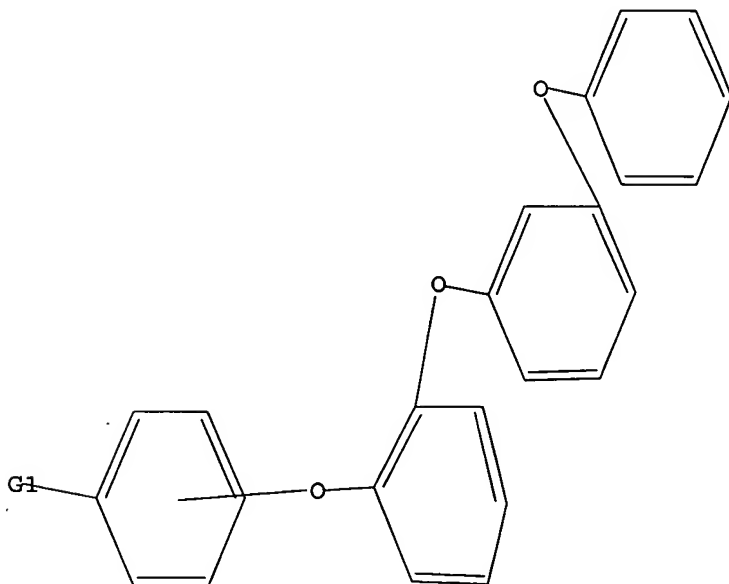
Match level :

1:CLASS 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom  
11:Atom 12:Atom 13:CLASS 14:CLASS 16:CLASS 17:Atom 18:Atom 19:Atom 20:Atom  
21:Atom 22:Atom 23:CLASS 25:CLASS 26:CLASS 28:CLASS 29:CLASS 30:CLASS  
31:CLASS 32:CLASS 33:CLASS 35:CLASS

L17 STRUCTURE UPLOADED

=> d query

L17 STR



G1 N,X

Structure attributes must be viewed using STN Express query preparation.

=> s l17

SAMPLE SEARCH INITIATED 19:28:47 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 5839 TO ITERATE

17.1% PROCESSED 1000 ITERATIONS  
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 112199 TO 121361  
PROJECTED ANSWERS: 0 TO 0

L18 0 SEA SSS SAM L17

=> s l17 full  
FULL SEARCH INITIATED 19:28:52 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 118267 TO ITERATE

100.0% PROCESSED 118267 ITERATIONS 2 ANSWERS  
SEARCH TIME: 00.00.01

L19 2 SEA SSS FUL L17

=> fil caplus		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	161.76	830.14
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-2.19

FILE 'CAPLUS' ENTERED AT 19:28:57 ON 12 JAN 2005  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 12 Jan 2005 VOL 142 ISS 3  
FILE LAST UPDATED: 11 Jan 2005 (20050111/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l19  
L20 0 L19

=> fil reg		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.45	830.59
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION

CA SUBSCRIBER PRICE

0.00

-2.19

FILE 'REGISTRY' ENTERED AT 19:29:05 ON 12 JAN 2005  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2005 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file  
provided by InfoChem.

STRUCTURE FILE UPDATES: 10 JAN 2005 HIGHEST RN 811411-12-8  
DICTIONARY FILE UPDATES: 10 JAN 2005 HIGHEST RN 811411-12-8

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

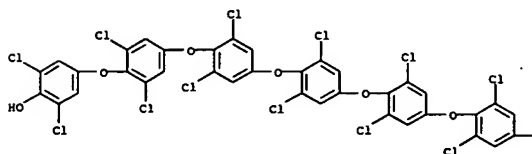
Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

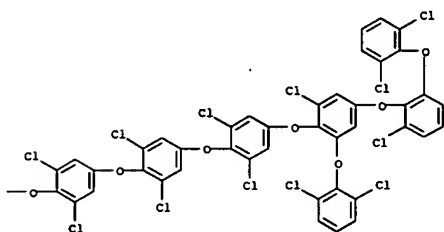
Experimental and calculated property data are now available. For more  
information enter HELP PROP at an arrow prompt in the file or refer  
to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> d 119 1-2

PAGE 1-A



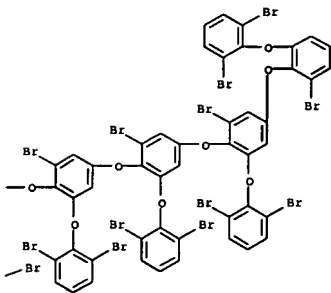
PAGE 1-B



1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L19 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2005 ACS on STN (Continued)

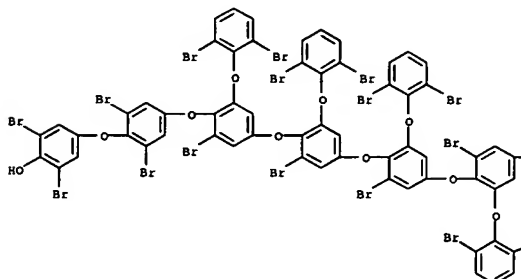
PAGE 1-B



1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

[illegible]

PAGE 1-A



=> fil reg

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	4.11	834.70
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-2.19

FILE 'REGISTRY' ENTERED AT 19:29:28 ON 12 JAN 2005  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2005 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file  
provided by InfoChem.

STRUCTURE FILE UPDATES: 10 JAN 2005 HIGHEST RN 811411-12-8  
DICTIONARY FILE UPDATES: 10 JAN 2005 HIGHEST RN 811411-12-8

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more  
information enter HELP PROP at an arrow prompt in the file or refer  
to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> FIL REGISTRY

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.43	835.13
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-2.19

FILE 'REGISTRY' ENTERED AT 19:29:38 ON 12 JAN 2005  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2005 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file  
provided by InfoChem.

STRUCTURE FILE UPDATES: 10 JAN 2005 HIGHEST RN 811411-12-8  
DICTIONARY FILE UPDATES: 10 JAN 2005 HIGHEST RN 811411-12-8

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.



Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> SET TERMSET E#

SET COMMAND COMPLETED

=> DEL SEL Y

=> SEL L19 2 RN

E1 THROUGH E1 ASSIGNED

=> S E1/RN

L21 1 107204-66-0/RN

=> SET TERMSET LOGIN

SET COMMAND COMPLETED

=> FIL CAOLD

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.51	835.64
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-2.19

FILE 'CAOLD' ENTERED AT 19:29:42 ON 12 JAN 2005  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1907-1966

FILE LAST UPDATED: 01 May 1997 (19970501/UP)

This file contains CAS Registry Numbers for easy and accurate substance identification. Title keywords, authors, patent assignees, and patent information, e.g., patent numbers, are now searchable from 1907-1966. TIFF images of CA abstracts printed between 1907-1966 are available in the PAGE display formats.

This file supports REG1stRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

=> S L21

L22 1 L21

=> d l22



L22 ANSWER 1 OF 1 CAOLD COPYRIGHT 2005 ACS on STN  
AN CA60:5373c CAOLD  
TI preparation of halogenated polyoxyphenylenes  
AU Petit, Jean; Laborie-Gardais, F.  
IT 608-33-3 107204-66-0 107822-04-8

=> fil reg  
COST IN U.S. DOLLARS

FULL ESTIMATED COST

SINCE FILE ENTRY	TOTAL SESSION
1.07	836.71

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

CA SUBSCRIBER PRICE

SINCE FILE ENTRY	TOTAL SESSION
0.00	-2.19

FILE 'REGISTRY' ENTERED AT 19:30:10 ON 12 JAN 2005  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2005 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 10 JAN 2005 HIGHEST RN 811411-12-8  
DICTIONARY FILE UPDATES: 10 JAN 2005 HIGHEST RN 811411-12-8

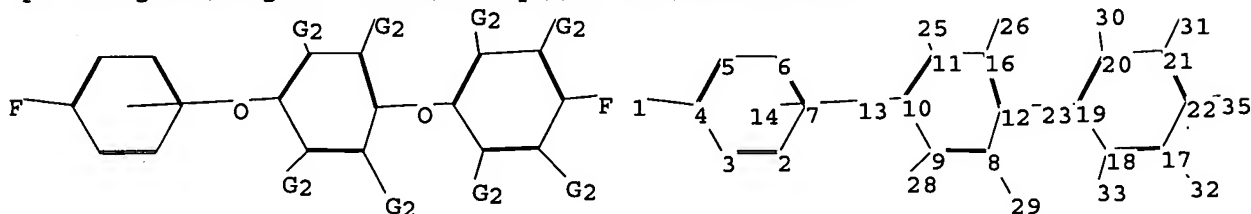
TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>  
Uploading C:\Program Files\Stnexp\Queries\10718532.str



chain nodes :

1 13 23 25 26 28 29 30 31 32 33 35

ring nodes :

2 3 4 5 6 7 8 9 10 11 12 16 17 18 19 20 21 22

chain bonds :

1-4 8-29 9-28 10-13 11-25 12-23 16-26 17-32 18-33 19-23 20-30 21-31 22-35

ring bonds :

2-3 2-7 3-4 4-5 5-6 6-7 8-9 8-12 9-10 10-11 11-16 12-16 17-18 17-22 18-19 19-20 20-21 21-22

exact/norm bonds :

8-29 9-28 10-13 11-25 12-23 16-26 17-32 18-33 19-23 20-30 21-31

exact bonds :

1-4 22-35

normalized bonds :

2-3 2-7 3-4 4-5 5-6 6-7 8-9 8-12 9-10 10-11 11-16 12-16 17-18 17-22  
18-19 19-20 20-21 21-22

G1:N,X

G2:X,Ak,H

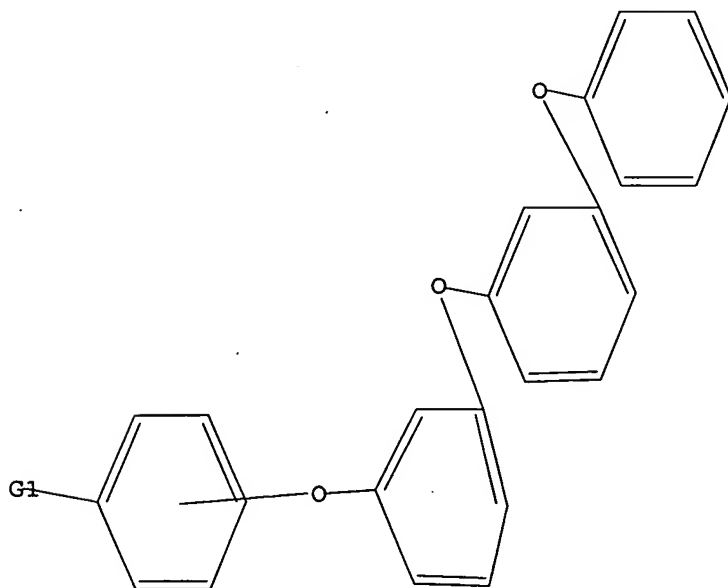
Match level :

1:CLASS 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom  
11:Atom 12:Atom 13:CLASS 14:CLASS 16:CLASS 17:Atom 18:Atom 19:Atom 20:Atom  
21:Atom 22:Atom 23:CLASS 25:CLASS 26:CLASS 28:CLASS 29:CLASS 30:CLASS  
31:CLASS 32:CLASS 33:CLASS 35:CLASS

L23 STRUCTURE UPLOADED

=> d query

L23 STR



G1 N,X

Structure attributes must be viewed using STN Express query preparation.

=> s l23

SAMPLE SEARCH INITIATED 19:30:43 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 2024 TO ITERATE

49.4% PROCESSED 1000 ITERATIONS  
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
SEARCH TIME: 00.00.01

1 ANSWERS

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 37782 TO 43178  
PROJECTED ANSWERS: 1 TO 125

L24 1 SEA SSS SAM L23

=> s l23 full  
FULL SEARCH INITIATED 19:30:47 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 40404 TO ITERATE

100.0% PROCESSED 40404 ITERATIONS 56 ANSWERS  
SEARCH TIME: 00.00.01

L25 56 SEA SSS FUL L23

=> fil caplus		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	161.33	998.04
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-2.19

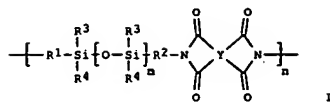
FILE 'CAPLUS' ENTERED AT 19:30:52 ON 12 JAN 2005  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 12 Jan 2005 VOL 142 ISS 3  
FILE LAST UPDATED: 11 Jan 2005 (20050111/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l25  
L26 39 L25  
=> d l26 1-39 abs ibib hitstr



AB Title comps. comprise 100 parts thermoplastic polyimides obtained from diamine components containing diamines I and tetracarboxylic acid dianhydrides and 1-200 parts thermosetting resins, wherein R = H, halogen atom, or hydrocarbon; n = 1-50 integer; and Y = C2-10 (substituted)divalent group (when n = 2, Y may be same or different each other). Thus, 4,4'-bis(3-aminophenoxy)biphenyl 17.00, Elasmor 1000 40.14, and oxy-4,4'-diphthalic anhydride 25.05 g were reacted to give a polyimide solution with logarithmic viscosity 0.45 dL/g, 100 parts (based on solid) of which was mixed with VG 3101 epoxy compound 20, ZMAOK-PW 1, and 1FX silica-based filler 40 parts, applied on A 31 a treated polyethylene terephthalate film, heated at 90° for 20 min, and peeled-off from the PET film to give an adhesive film with glass transition temperature 49°, which was heat-pressed at 200° for 1 s under 0.1 N, cured at 180° for 3 h to give a test piece with shear strength 6 MPa and cyclic siloxane content <1 ppm.

ACCESSION NUMBER: 2004:1019960 CAPLUS

DOCUMENT NUMBER: 142:7648

TITLE:

Polyimide-based adhesive resin compositions and film-shaped adhesives with good adhesion at low temperature and heat resistance for semiconductor devices

INVENTOR(S): Kodama, Yoichi; Maruyama, Hiroshi; Naruse, Isao

PATENT ASSIGNEE(S): Mitsui Chemicals, Inc., Japan

SOURCE:

PCT Int. Appl., 26 pp.

CODEN: PIPOD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004101701	A1	200411125	WO 2004-JP5266	20040413
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, GU, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

IT 762304-00-7P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (blend with thermosetting resin: polyimide-based adhesive resin)

compos. and film-shaped adhesives with good adhesion at low temperature and heat resistance for semiconductor devices)

RN 762304-00-7 CAPLUS

CN 1,3-isobenzofurandione, 5,5'-oxybis-, polymer with  $\alpha$ -(4-aminobenzoyl)- $\omega$ -(4-aminobenzoyl)oxy]poly[oxy-1,4-butanediyl] and 3,3'-(1,3-phenylenebis(oxy-3,1-phenyleneoxy))bis[benzenamine], block

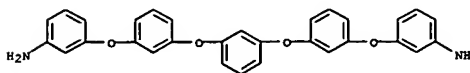
(SCI)

(CA INDEX NAME)

CH 1

CRN 500577-28-6

CMF C30 H24 N2 O4

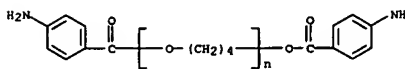


CH 2

CRN 54667-43-5

CMF (C4 H8 O)n C14 H12 N2 O3

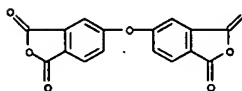
CCI PMS



CH 3

CRN 1823-59-2

CMF C16 H6 O7



AB The laminate useful for flexible printed circuit boards comprises a polyimide layer and a metal foil, where 21 layer of polyimide layer is derived from a polyimide block copolymer. Preparing a 101 polyimide varnish

of 1,3-bis(3-aminophenoxy)benzene-3,3',4,4'-biphenyltetracarboxylic dianhydride (BPDA) copolymer in phenol and cresol, adding BPDA, and stirring with a polyamic acid varnish of 3,4'-oxydianiline-BPDA copolymer at 60° for 48 h gave a polyimide block copolymer. Coating this block copolymer on a polyimide film (Kapton 150EN) on one side and a

p-phenylenediamine-4,4'-oxydianiline-BPDA-4,4'-bis(3-aminophenoxy)biphenyl copolymer on the other, and hot pressing with a Cu foil on the first side gave a laminate with peel strength 0.80 kN/m and light transmittance 57.9%.

ACCESSION NUMBER: 2004:993015 CAPLUS

DOCUMENT NUMBER: 141:425087

TITLE: Polyimide-metal laminates with good peel strength and distortion resistance and their manufacture

INVENTOR(S): Otsubo, Eiji; Nakazawa, Masaki; Kawaguchi, Masao;

Tanabe, Kenji

PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.

CODEN: JPOKAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004322636	A2	20041118	JP 2004-83824	20040323
PRIORITY APPL. INFO.:			JP 2003-102514	A 20030407

IT 793734-09-5P, Bis(3-aminopropyl)tetramethyldisiloxane-1,3-Bis(3-(3-aminophenoxy)phenoxy)benzene-3,3',4,4'-Benzophenonetetracarboxylic dianhydride copolymer

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation);

RACT

(Reactant or reagent) (polyimide-metal laminates with good peel strength and distortion resistance and their manufacture)

RN 793734-09-5 CAPLUS

CN 1,3-isobenzofurandione, 5,5'-carbonylbis-, polymer with 3,3'-(1,3-phenylenebis(oxy-3,1-phenyleneoxy))bis[benzenamine] and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediy)bis[1-propanamine] (9CI)

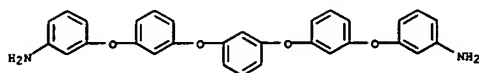
(CA

INDEX NAME)

CH 1

CRN 500577-28-6

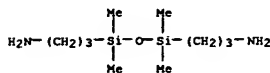
CMF C30 H24 N2 O4



CM 2

CRN 2469-55-8

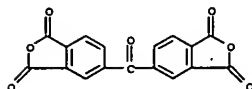
CMF C10 H28 N2 O S12



CM 3

CRN 2421-28-5

CMF C17 H6 O7



IT 793734-12-0P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyimide-metal laminates with good peel strength and distortion resistance and their manufacture)

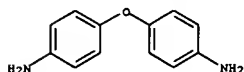
RN 793734-12-0 CAPLUS

CM 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 3,3'-[1,1'-biphenyl]-4,4'-diylbis(oxy)bis(benzenamine), 5,5'-carbonylbis[1,3-isobenzofurandione], 4,4'-oxybis(benzenamine), 3,3'-[1,3-phenylenebis(oxy-3,1-phenyleneoxy)]bis(benzenamine) and 3,3'-[1,1,3,3-tetramethyl-1,3-disiloxanediyl]bis(1-propanamine), block (9CI) (CA INDEX NAME)

CM 1

CRN 500577-28-6

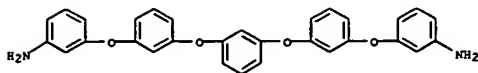
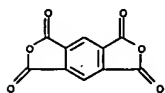
CMF C30 H24 N2 O4



CM 6

CRN 89-32-7

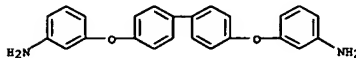
CMF C10 H2 O6



CM 2

CRN 105112-76-3

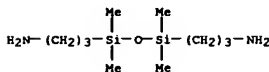
CMF C24 H20 N2 O2



CM 3

CRN 2469-55-8

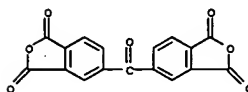
CMF C10 H28 N2 O S12



CM 4

CRN 2421-28-5

CMF C17 H6 O7



CM 5

CRN 101-80-4

CMF C12 H12 N2 O

AB The method is characterized in that (A) the foils are immersed in acidic aqueous solns. with pH <6 containing H2SO4, HClO4, AcOH, HNO3, and/or HNO2 and/or

(B) the laminates are immersed in the acidic aqueous solns. so as to form oxide films with thickness 0.01-50 Å on surfaces (opposite to the resins) of the foils. Thus, coating Apical 50HP (polyimide film) on both sides with a varnish of 1,3-bis[3-(3-aminophenoxy)phenoxy]benzene 3,3',4,4'-benzophenonetetracarboxylic dianhydride copolymer, laminating a 30.5-μm foil and a 63.5-μm foil of SUS 304H-TA (stainless steel) via the resulting double-faced adhesive sheet, and hot-pressing the resulting 5-layer laminate gave a test piece with maximum pit size 5 μm after immersion in 1.5 N HCl for 120 s.

ACCESSION NUMBER: 2004:957254 CAPLUS

DOCUMENT NUMBER: 141:411931

TITLE: Stainless steel foil-dielectric resin laminates with excellent pitting corrosion resistance, their manufacture, and hard disk drive suspensions from

them

INVENTOR(S): Hirota, Koji; Nakazawa, Oki  
PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JIOQAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004314523	A2	20041111	JP 2003-113838	20030418
PRIORITY APPLN. INFO.:			JP 2003-113838	20030418

IT 500577-35-5P, 3,3',4,4'-Benzophenonetetracarboxylic dianhydride-1,3-bis[3-(3-aminophenoxy)phenoxy]benzene copolymer  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(adhesive layer: manufacture of stainless foil-polyimide laminates with good

pitting corrosion resistance for hard disk drive suspensions)

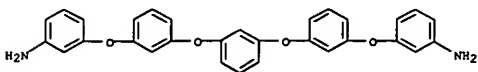
RN 500577-35-5 CAPLUS

CM 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with 3,3'-[1,3-phenylenebis(oxy-3,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1

CRN 500577-28-6

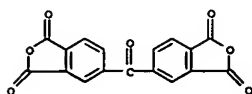
CMF C30 H24 N2 O4



CM 2



CRN 2421-28-5  
CMF C17 H6 O7



AB A resin composition with high retention stability and heat resistance is composed of imidazole compds. having m.p. and decomposition temperature >235°.

epoxy compds. containing ≥3 glycidyl groups, polyimides, and, optionally, organic or inorg. fillers. The above composition can be laminated on one side or both sides of a heat-resistant film to obtain adhesive films. Thus, a polyimide resin prepared from 1,3-bis(3-(3-aminophenoxy)phenoxy)benzene, NH<sub>2</sub>-terminated polydimethylsiloxane (BY 16 853U), ethylene glycol bis trimellitic dianhydride, and oxy-4,4'-diphthalic dianhydride was mixed with an imidazole compound (ZMAOK FW), an epoxy (VG 3101), and silica filler (1 FX) to receive a composition, which was cast coated on a PET film (A 31), cured, and peeled off to obtain an adhesive film.

ACCESSION NUMBER: 2004:842308 CAPIUS  
DOCUMENT NUMBER: 141:350860  
TITLE: Imidazole and epoxy compound-containing polyimide resin composition and adhesive film prepared thereby  
INVENTOR(S): Kodama, Toichi; Maruyama, Hiroshi; Morita, Moritatsu  
PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.  
CODEN: JKOKAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

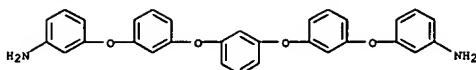
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004285284	A2	20041014	JP 2003-81782	20030325
PRIORITY APPLN. INFO.: JP 2003-81782 20030325				

IT 709616-71-7P  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (imidazole and epoxy compound-containing polyimide resin composition for adhesive film)

RN 709616-71-7 CAPIUS  
CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,2-ethanediyl ester, polymer with α-[(3-aminopropyl)dimethylsilyl]-ω-[(3-aminopropyl)dimethylsilyl]oxy]poly(oxy(dimethylsilylene)), 5,5'-oxybis[1,3-isobenzofurandione] and 3,3'-(1,3-phenylenebis(oxy-3,1-phenyleneoxy))bis[benzenamine] (9CI) (CA INDEX NAME)

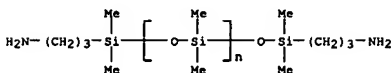
CM 1

CRN 500577-28-6  
CMF C30 H24 N2 O4



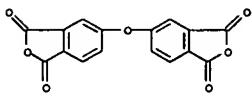
CM 2

CRN 97917-34-5  
CMF (C2 H6 O Si)<sub>n</sub> C10 H28 N2 O Si2  
CCI PMS



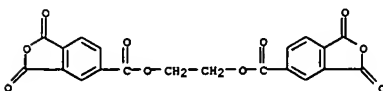
CM 3

CRN 1823-59-2  
CMF C16 H6 O7



CM 4

CRN 1732-96-3  
CMF C20 H10 O10



AB The laminate with improved alkali etchability, low warpage, and high peeling strength has a single layer of the polyimide comprising diamines containing 1,3-bis(3-aminophenoxy)benzene, 4,4'-bis(3-aminophenoxy)biphenyl, or 1,3-bis[3-(3-aminophenoxy)phenoxy]benzene and acid anhydrides containing ≥50% (based on total anhydrides) of pyromellitic dianhydride. The laminate is manufactured by hot-pressing the stainless steel foil and the metal foil through the single layer polyimide film. Thus, a 1,3-bis(3-aminophenoxy)benzene-pyromellitic dianhydride copolymer film was sandwiched between C 7025 (Cu alloy foil) and SUS 304H-TA (stainless steel foil) and hot-pressed to give a laminate showing etching rate 2.1 μm/min and peeling strength 1.6 kN/m.

ACCESSION NUMBER: 2004:819795 CAPIUS  
DOCUMENT NUMBER: 141:315427  
TITLE: Stainless steel foil-thermoplastic polyimide-metal foil laminate and its manufacture for hard disk suspension  
INVENTOR(S): Hirota, Koji; Nakazawa, Oki  
PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.  
CODEN: JKOKAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

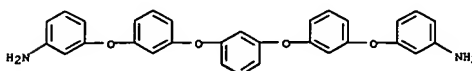
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004276413	A2	20041007	JP 2003-71101	20030317
PRIORITY APPLN. INFO.: JP 2003-71101 20030317				

IT 765911-02-2P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (stainless steel foil-thermoplastic polyimide-metal foil laminate and its manufacture for hard disk suspension)

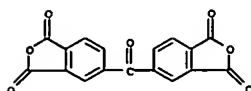
RN 765911-02-2 CAPIUS  
CN 1H,3H-Benzo(1,2-c:4,5-c')difuran-1,3,5,7-tetrone, polymer with [5,5'-bis(isobenzofuran)-1,1',3,3'-tetrone, 5,5'-carbonylbis[1,3-isobenzofurandione] and 3,3'-(1,3-phenylenebis(oxy-3,1-phenyleneoxy))bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

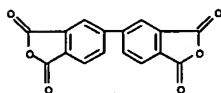
CRN 500577-28-6  
CMF C30 H24 N2 O4



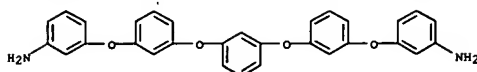
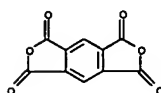
CRN 2421-28-5  
 CHF C17 H6 O7



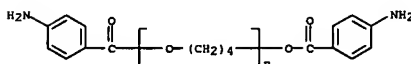
CH 3  
 CRN 2420-87-3  
 CHF C16 H6 O6



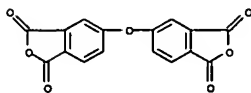
CH 4  
 CRN 89-32-7  
 CHF C10 H2 O6



CH 2  
 CRN 54667-43-5  
 CHF (C4 H8 O)n C14 H12 N2 O3  
 CCI PMS

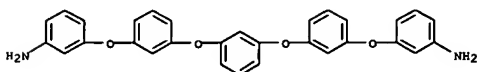


CH 3  
 CRN 1823-59-2  
 CHF C16 H6 O7



RN 762304-02-9 CAPIUS  
 CH 1,3-Isobenzofurandione, 5,5'-oxybis-, polymer with  $\alpha$ -(4-aminobenzoyl)- $\omega$ -[(4-aminobenzoyl)oxy]poly(oxy-1,4-butanediyl), 1,3-benzenediamine and 3,3'-[1,3-phenylenebis(oxy-3,1-phenyleneoxy)]bis[benzenamine], block (9CI) (CA INDEX NAME)

CH 1  
 CRN 500577-28-6  
 CHF C30 H24 N2 O4



CH 2

packaging, are prepared by reaction of a mol tetracarboxylic dianhydrides, b mol aromatic diamines H2NC6R4(XC6R4)pXC6R4NH2 [p = 1-5; R = H, halo, hydrocarbyl; X = direct link, O, CO, CMe2, C(CF3)2], c mol H2NC6H4CO2(YO)qCOC6H4NH2 [q = 1-50; Y = C2-10 alkyl], and d mol other diamines in the ratios of  $0.8 \leq a/(b+c+d) \leq 1.2$ ,  $0.05 \leq c/(b+c+d) \leq 0.95$ , and  $0.5 < (b+c)/(b+c+d) \leq 1.0$ . The adhesives contain the polyimides and/or their precursor polyamic acids. Thus, 0.0271 mol 4,4'-bis(3-aminophenoxy)biphenyl and 0.0407 mol poly(tetramethylene oxide) di-p-aminobenzoate (Elaomer 1000) were dissolved in N-methyl-2-pyrrolidone/mesitylene mixture, to which

0.0719 mol oxy-4,4'-diphthalic dianhydride was added, heated to 170-180° for 14 h, and freed of H2O to give a polyimide, which was dissolved in N-methyl-2-pyrrolidone, cast on a surface-treated PET film, heated to 90° for 20 min, and peeled from the PET film to give an adhesive film showing Tg 40° and good adhesion.

ACCESSION NUMBER: 2004:801253 CAPIUS  
 DOCUMENT NUMBER: 141:297020  
 TITLE: Polyimides and heat-resistant adhesives thereof  
 INVENTOR(S): Kodama, Yoichi  
 PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
 CODEN: JJOCAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

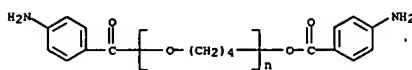
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004269622	A2	20040930	JP 2003-60163	20030306
PRIORITY APPLN. INFO.:			JP 2003-60163	20030306

IT 762304-00-7P 762304-02-9P 762304-04-1P  
 762304-06-3P  
 RL: 1MP (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyoxyalkylene bis(aminobenzoate)-based polyimides as heat-resistant adhesives with good low-temperature adhesion)

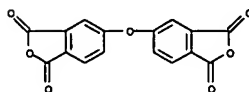
RN 762304-00-7 CAPIUS  
 CH 1,3-Isobenzofurandione, 5,5'-oxybis-, polymer with  $\alpha$ -(4-aminobenzoyl)- $\omega$ -[(4-aminobenzoyl)oxy]poly(oxy-1,4-butanediyl) and 3,3'-[1,3-phenylenebis(oxy-3,1-phenyleneoxy)]bis[benzenamine], block (9CI) (CA INDEX NAME)

CH 1  
 CRN 500577-28-6  
 CHF C30 H24 N2 O4

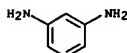
CRN 54667-43-5  
 CHF (C4 H8 O)n C14 H12 N2 O3  
 CCI PMS



CH 3  
 CRN 1823-59-2  
 CHF C16 H6 O7

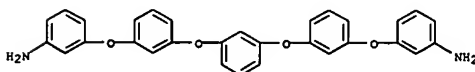


CH 4  
 CRN 108-45-2  
 CHF C6 H8 N2



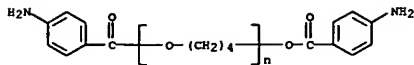
RN 762304-04-1 CAPIUS  
 CH 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,2-ethanediyl ester, polymer with  $\alpha$ -(4-aminobenzoyl)- $\omega$ -[(4-aminobenzoyl)oxy]poly(oxy-1,4-butanediyl) and 3,3'-[1,3-phenylenebis(oxy-3,1-phenyleneoxy)]bis[benzenamine], block (9CI) (CA INDEX NAME)

CH 1  
 CRN 500577-28-6  
 CHF C30 H24 N2 O4



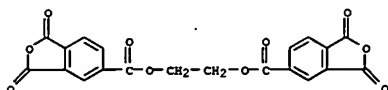
CM 2

CRN 54667-43-5  
 CHF (C4 H8 O)n C14 H12 N2 O3  
 CCI PMS



CM 3

CRN 1732-96-3  
 CHF C20 H10 O10

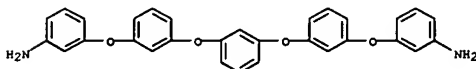


RN 762304-06-3 CAPLUS  
 CM 5-isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,2-ethanediyl ester, polymer with  $\alpha$ -(4-aminobenzoyl)- $\omega$ -[[(4-aminobenzoyl)oxy]poly(oxy-1,4-butanediyl)], 1,3-benzenediamine and 3,3'-(1,3-phenylenebis(oxy-3,1-phenyleneoxy))bis(benzenamine), block (9CI)

(CA INDEX NAME)

CM 1

CRN 500577-28-6  
 CHF C30 H24 N2 O4



CM 2

CRN 54667-43-5  
 CHF (C4 H8 O)n C14 H12 N2 O3  
 CCI PMS

L26 ANSWER 7 OF 39 CAPLUS COPYRIGHT 2005 ACS on STN

AB The polyimide-polyarylether, useful for film adhesive in semiconductor packaging process, is manufactured by the method involving polymerization of diamines containing diaminopolysiloxane and tetracarboxylic dianhydrides in removal of vaporized solvents from the system. Thus, 1,3-bis[3-(3-aminophenoxy)phenoxy]benzene 65.00, diaminopolysiloxane (BY 16-853U) 134.37, oxy-4,4'-diphthalic dianhydride 63.71, and ethylene glycol bistrimellitate dianhydride 28.09 g were polymerized in a mixture of 295.24 g N-methyl-2-pyrrolidone and 126.53 g mesitylene at 170-180° for 20 h, wherein 90% of the solvents were removed from the system, to give a polymer containing <5 ppm cyclic trimer and <5 ppm cyclic tetramer.

ACCESSION NUMBER: 2004:778996 CAPLUS

DOCUMENT NUMBER: 141:278329

TITLE: Manufacture of polyimide-polyarylether with reduced amount of volatile cyclic siloxane  
 INVENTOR(S): Kodama, Yoichi; Naruse, Isao; Kinoshita, Hitoshi; Morita, Moritaugu  
 PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan  
 SOURCE: Jpn. Kokai Tokyo Koho, 8 pp.  
 CODEN: JKOKXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004263058	A2	20040924	JP 2003-54236	20030228
PRIORITY APPLN. INFO.:			JP 2003-54236	20030228

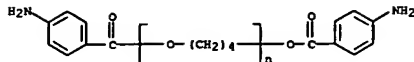
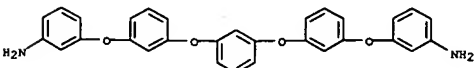
IT 709616-71-7F, 1,3-Bis[3-(3-aminophenoxy)phenoxy]benzene-BY 16-853U-ethylene glycol bistrimellitate dianhydride-oxy-4,4'-diphthalic dianhydride copolymer  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 [polyimide-polyarylether with reduced amount of volatile cyclic siloxane prepared under removal of volatile solvents]

RN 709616-71-7 CAPLUS

CM 5-isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,2-ethanediyl ester, polymer with  $\alpha$ -[[(3-aminopropyl)dimethylsilyl]- $\omega$ -[[(3-aminopropyl)dimethylsilyl]oxy]poly(oxy(dimethylsilylene))], 5,5'-oxybis[1,3-isobenzofurandione] and 3,3'-(1,3-phenylenebis(oxy-3,1-phenyleneoxy))bis(benzenamine) (9CI) (CA INDEX NAME)

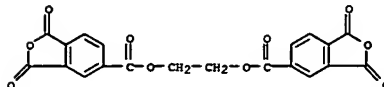
CM 1

CRN 500577-28-6  
 CHF C30 H24 N2 O4



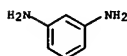
CM 3

CRN 1732-96-3  
 CHF C20 H10 O10



CM 4

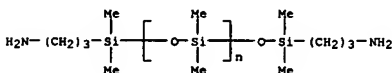
CRN 108-45-2  
 CHF C6 H8 N2



L26 ANSWER 7 OF 39 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

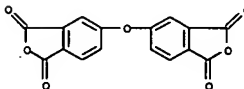
CM 2

CRN 97917-34-5  
 CHF (C2 H6 O Si)n C10 H28 N2 O Si2  
 CCI PMS



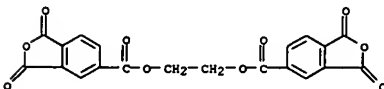
CM 3

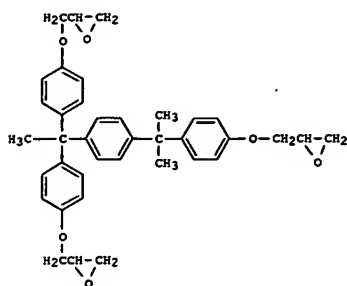
CRN 1823-59-2  
 CHF C16 H6 O7



CM 4

CRN 1732-96-3  
 CHF C20 H10 O10





I

AB The title leadframe fixing materials are adhesive-coated metal films, wherein the adhesive comprises 100 weight-parts polyimide and 1-100 weight-parts epoxy compound (I). The metal films (film thickness 3-250  $\mu\text{m}$ ) may be Cu, Ni, Al, stainless steel, or their alloys. The composite adhesives provide excellent low-temperature adhesion and thermal resistance without delamination or bubble formation at 260°.

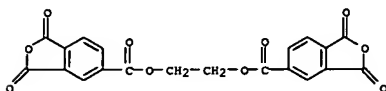
ACCESSION NUMBER: 2004:751549 CAPIUS  
DOCUMENT NUMBER: 141:287028

TITLE: Leadframe fixing adhesive materials  
INVENTOR(S): Kodama, Yoichi; Maruyama, Hiroshi  
PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.  
CODEN: JKKXAF

DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004259789	A2	20040916	JP 2003-46650	20030225
PRIORITY APPLN. INFO.:			JP 2003-46650	20030225

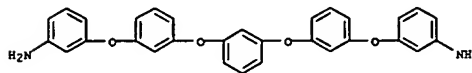
IT 709616-71-7  
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)  
(polyimide composition; leadframe fixing adhesive-coated metal films)



RN 709616-71-7 CAPIUS  
CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,2-ethanediyl ester, polymer with  $\alpha$ -[3-aminopropyl]dimethylsilyl]- $\omega$ -[[3-aminopropyl]dimethylsilyl]oxy]poly[oxy(dimethylsilylene)], 5,5'-oxybis[1,3-isobenzofurandione] and 3,3'-[1,3-phenylenebis(oxy-3,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

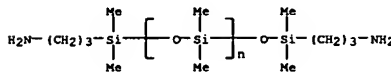
CM 1

CRN 500577-28-6  
CMF C30 H24 N2 O4



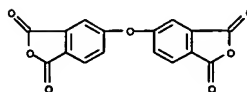
CM 2

CRN 97917-34-5  
CMF (C2 H6 O Si)n C10 H28 N2 O S12  
CCI PMS



CM 3

CRN 1823-59-2  
CMF C16 H6 O7



CM 4

CRN 1732-96-3  
CMF C20 H10 O10

AB A laminated polyimide/metal product useful for hard disk drive suspension comprises a metal foil and a polyimide resin layer formed thereon, wherein

the polyimide resin does not crack or sep. over a length of  $\geq 100 \mu\text{m}$  in the polyimide resin and/or at the interface between the polyimide resin and the metal foil when the product is heated for 5-10 min in an oven having an internal temperature of 340-360°, and the polyimide resin has a coefficient of hydroexpansivity at 32° of 1-20 ppm/°RH and an average

rate of etching with 50% aqueous KOH solution with a temperature of 80° of

$\geq 1.0 \mu\text{m}/\text{min}$ . The laminate has satisfactory heat resistance and excellent dimensional stability. It can be processed by etching with an alkali solution. Thus, a laminate containing a stainless foil (SUS 304H-TA) and a

3,3',4,4'-benzophenonetetracarboxylic acid dianhydride-1,3-bis[3-aminophenoxy]benzene-pyromellitic dianhydride copolymer layer was

manufactured  
ACCESSION NUMBER: 2004:718443 CAPIUS  
DOCUMENT NUMBER: 141:226612  
TITLE: Layered polyimide/metal product with good etching property  
INVENTOR(S): Hirota, Koji; Nakazawa, Naoki; Kodama, Youichi  
PATENT ASSIGNEE(S): Mitsui Chemicals, Inc., Japan  
SOURCE: PCT Int. Appl., 33 pp.  
CODEN: FIKX02  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004073975	A1	20040902	WO 2004-JP1316	20040209
W:	AE, AE, AG, AL, AM, AN, AP, AT, AU, AZ, BA, BB, BG, BR, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CU, CZ, DE, DE, DK, DM, DZ, EC, EE, EG, ES, ES, FI, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, JP, KE, KE, KG, KP, KR, KR, KZ, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NI			
RW:	BW, CH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			

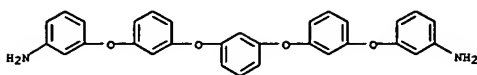
PRIORITY APPLN. INFO.: JP 2003-39146 A 20030218

IT 748705-03-5P  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(heat-resistant metal-polyimide laminates with good etching property and dimensional stability)

RN 748705-03-5 CAPIUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 5,5'-carbonylbis[1,3-isobenzofurandione] and 3,3'-[1,3-phenylenebis(oxy-3,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

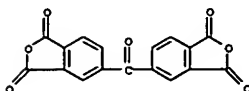
CM 1

CRN 500577-28-6  
CHF C30 H24 N2 O4



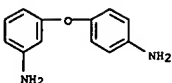
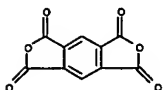
CH 2

CRN 2421-28-5  
CHF C17 H6 O7



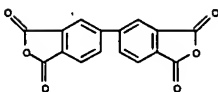
CH 3

CRN 89-32-7  
CHF C10 H2 O6



CH 3

CRN 2420-87-3  
CHF C16 H6 O6



AB A laminate comprises a metallic foil and at least one polyimide layers of the same or different polyimide, wherein the first thermoplastic polyimide

layer, which contacts with the foil layer, is made from (A) a specified diamine containing 50-100 mol% 3,4'-oxydianiline and/or 1,3-bis(4-aminophenoxy)benzene and (B) 2,1 tetracarboxylic dianhydride selected from 3,3',4,4'-biphenyltetracarboxylic dianhydride, pyromellitic dianhydride, and 3,3',4,4'-benzophenonetetracarboxylic dianhydride.

ACCESSION NUMBER: 2004:609185 CAPIUS

DOCUMENT NUMBER: 141:141513

TITLE: Heat-resistant polyimide metallic foil laminate for flexible printed circuit board

INVENTOR(S): Otsubo, Eiji; Makazawa, Hiroki; Tanabe, Kenji

PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKOQAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004209680	A2	20040729	JP 2002-378936	20021227
PRIORITY APPLN. INFO.:			JP 2002-378936	20021227

IT 727429-18-7P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(heat-resistant polyimide metallic foil laminate for flexible printed circuit board)

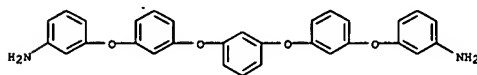
RN 727429-18-7 CAPIUS

CH [5,5'-Bis(benzofuran)-1,1',3,3'-tetrone, polymer with 3-(4-aminophenoxy)benzenamine and 3,3'-[1,3-phenylenebis(oxy-3,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)]

CH 1

CRN 500577-28-6

CHF C30 H24 N2 O4



CH 2

CRN 2657-87-6

CHF C12 H12 N2 O

AB The composition contains 100 parts of a polyimide and 1-100 parts 1,1,1-(p-[2"-(4"-glycidylphenoxy)phenyl]methyl)phenyl]bis(p-glycidylphenoxy)ethane (I). The film adhesive is that made of the composition or made of a film substrate or metal foil and the composition layer on

21 side. Thus, 15.00:43.44:18.49:8.15 1,3-bis[3-(3-aminophenoxy)phenoxy]benzene- $\alpha,\omega$ -bis[3-(3-aminopropyl)polydimethylsiloxane (BY 16-853U)-oxy-4,4'-diphthalic dianhydride-ethylene glycol bistrimellitate dianhydride copolymer 100, I (VG 3101) 20, and an imidazole (2MAOK-PW) 1 part were mixed, cast on a

PET film, and cured to give the adhesive film after removal of the PET film. Then, 2 Si chips were laminated through the film, pressed at 200° for 1 s, and heated at 180° without load for 3 h to give a test piece showing shear strength 7 MPa.

ACCESSION NUMBER: 2004:529830 CAPIUS

DOCUMENT NUMBER: 141:72640

TITLE: Polyimide composition containing epoxy compound and film adhesive made of the composition

INVENTOR(S): Kodama, Yoichi; Maruyama, Hiroshi; Naruse, Isao;

Kinoshita, Hitoshi; Fujieda, Nobuhiko; Morita, Moritsugu

PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKOQAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004182804	A2	20040702	JP 2002-349636	20021202
PRIORITY APPLN. INFO.:			JP 2002-349636	20021202

IT 709616-71-7P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyimide composition containing epoxy compound for film adhesive for semiconductor device fabrication)

RN 709616-71-7 CAPIUS

CH 5-isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,2-ethanediyl ester, polymer with  $\alpha$ -[3-(3-aminopropyl)dimethylsilyl]- $\omega$ -[3-(3-aminopropyl)dimethylsilyl]oxy]poly[oxymethyl(dimethylsilyl)ene],

5,5'-oxybis[1,3-isobenzofurandione] and 3,3'-[1,3-phenylenebis(oxy-3,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)]

CH 1

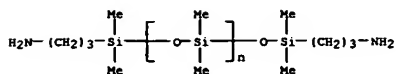
CRN 500577-28-6

CHF C30 H24 N2 O4



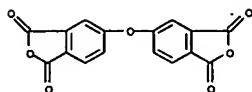
CH 2

CRN 97917-34-5  
 CHF (C2 H6 O Si)n C10 H28 N2 O Si2  
 CCI PMS



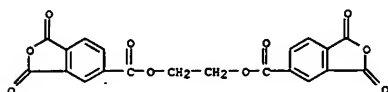
CH 3

CRN 1823-59-2  
 CHF C16 H6 O7

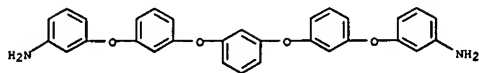


CH 4

CRN 1732-96-3  
 CHF C20 H10 O10

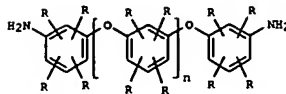
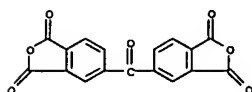


CRN 500577-28-6  
 CHF C30 H24 N2 O4



CH 2

CRN 2421-28-5  
 CHF C17 H6 O7



AB The adhesive sheets comprise metal sheets successively laminated with 2 of thermoplastic polyimide adhesive layers (A, B) with  $T_gA > T_gB$  ( $T_gA$ ,  $T_gB$  =  $T_g$  of A, B, resp.), where B are prepared from I (R = H, halo, hydrocarbyl; n = 1-5) and 3,3',4,4'-benzophenonetetracarboxylic dianhydride. Thus, a Cu foil (SLP 105WB) was successively coated with 3,3',4,4'-biphenyltetracarboxylic dianhydride-4,4'-bis(3-aminophenoxy)biphenyl copolymer and 3,3',4,4'-benzophenonetetracarboxylic dianhydride-1,3-bis(3-aminophenoxy)benzene copolymer and thermally cured to give a multilayer film ( $T_gA$  240°,  $T_gB$  200°), which was hot-press bonded with a lead frame (YEP 42) and sealed with epoxy resin to give a specimen, showing no blistering nor delamination after aging at 85° and relative humidity 85% and then 3-cycle soldering at 220°.

ACCESSION NUMBER: 2004:472785 CAPIUS  
 DOCUMENT NUMBER: 141:24856  
 TITLE: Heat sink-equipped polyimide adhesive sheets with good heat moisture resistance for fixing lead frames  
 INVENTOR(S): Kobayashi, Masanao; Nakazawa, Masaki  
 PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.  
 CODEN: JKOQAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004165270	A2	20040610	JP 2002-326883	20021111
PRIORITY APPLN. INFO.: JP 2002-326883 20021111				

IT 500577-35-5P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (adhesive layers; lead frame-fixing adhesive sheets comprising heat-sinking metal sheets and two of polyimide adhesive layers and showing good heat moisture resistance)  
 RN 500577-35-5 CAPIUS  
 CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with 3,3'-[1,3-phenylenebis(oxy-3,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)  
 CH 1

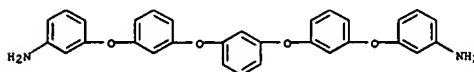
AB The photoresists have sea phases and island phases showing average diameter  $\leq 1.5 \mu m$  after photocuring and postbaking at 150-300° for 5-120 min. Preferably, the sea phases comprises polyimides, and the island phases comprises acrylic polymers. The dry films are manufactured by applying solns. of the photosensitive resin compns. on substrates and drying at 8-130° for 2-60 min. The photoresists produce fine patterns and dry films showing good flexibility after low-energy light exposure and postbaking.

ACCESSION NUMBER: 2004:433334 CAPIUS  
 DOCUMENT NUMBER: 140:431416  
 TITLE: Alkali-developable photoresists, their dry films, manufacture of the dry films, and articles having their cured products  
 INVENTOR(S): Funaki, Katsuhiko; Tsuda, Takeshi  
 PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.  
 CODEN: JKOQAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004151191	A2	20040527	JP 2002-314000	20021029
PRIORITY APPLN. INFO.: JP 2002-314000 20021029				

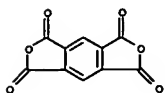
IT 500577-31-1P, 1,3-Bis[3-(3-aminophenoxy)phenoxy]benzene-pyromellitic dianhydride copolymer 591880-52-1P, 3,3'-Bis[3-(3-aminophenoxy)diphenyl ether-pyromellitic dianhydride copolymer  
 RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
 (dry-film photoresists having acrylic polymer-polyimide island-sea morphol.)  
 RN 500577-31-1 CAPIUS  
 CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 3,3'-[1,3-phenylenebis(oxy-3,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)  
 CH 1

CRN 500577-28-6  
 CHF C30 H24 N2 O4



CH 2

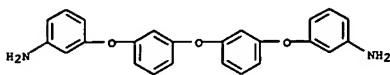
CRN 89-32-7  
CMF C10 H2 O6



RN 691880-52-1 CAPIUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 3,3'-(oxybis(3,1-phenyleneoxy))bis(benzenamine) (9CI) (CA INDEX NAME)

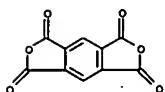
CM 1

CRN 217182-71-3  
CMF C24 H20 N2 O3



CM 2

CRN 89-32-7  
CMF C10 H2 O6



AB The laminates comprises a polyimide resin layer containing a bismaleimide compound of (modified) polyphenylene type as heat resistance improver and a metal foil layer and are useful for lead-free soldering and chip-on-film packagings with freedom from pinholes and swelling when forming a Au-Sn bond or Au-Au bond. Polyimide resin compns. for making the laminates are also provided which contain aromatic polyamic acids or/and polyimides.

In an example, a polyamic acid derived from 1,3-bis(3-aminophenoxy)benzene and 3,3',4,4'-benzophenonetetracarboxylic dianhydride and containing 1,3-bis(3-maleimidophenoxy)benzene in dimethylacetamide was cast-coated on

a Cu foil to give a laminate having the good claimed properties.

ACCESSION NUMBER: 2004:402945 CAPIUS  
DOCUMENT NUMBER: 140:407829

TITLE: Polyimide-metal laminates with good low-temperature adhesiveness and solder heat resistance and low swelling

INVENTOR(S): Kodama, Yoichi; Mori, Minehiro; Tashiro, Masayuki;

Ohtsubo, Eiji; Nakazawa, Naoki; Tanabe, Kenji

PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan

SOURCE: Eur. Pat. Appl., 18 pp.

CODEN: EPXKDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1420048	A2	20040519	EP 2003-21627	20030925
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2004209962	A2	20040729	JP 2003-176439	20030620
CN 1485199	A	20040331	CN 2003-148387	20030630
US 2004096679	A1	20040520	US 2003-671565	20030929
PRIORITY APPLN. INFO.:			JP 2002-330365	A 20021114
			JP 2002-191779	A 20020701

IT 500577-35-SP 689258-98-SP

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

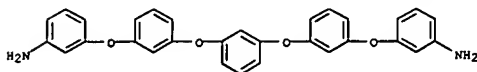
(polyimide-metal laminates with good low-temperature adhesiveness and solder heat resistance and low swelling)

RN 500577-35-5 CAPIUS

CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with 3,3'-(1,3-phenylenebis(oxy-3,1-phenyleneoxy))bis(benzenamine) (9CI) (CA INDEX NAME)

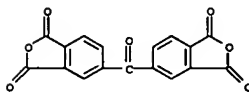
CM 1

CRN 500577-28-6  
CMF C30 H24 N2 O4



CM 2

CRN 2421-28-5  
CMF C17 H6 O7

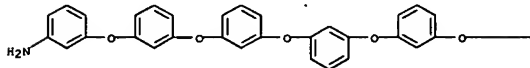


RN 689258-98-8 CAPIUS  
CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with 3,3'-(1,3-phenylenebis(oxy-3,1-phenyleneoxy-3,1-phenyleneoxy))bis(benzenamine) (9CI) (CA INDEX NAME)

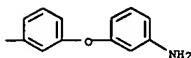
CM 1

CRN 500577-30-0  
CMF C42 H32 N2 O6

PAGE 1-A

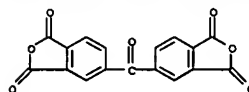


PAGE 1-B



CM 2

CRN 2421-28-5  
CMF C17 H6 O7



L26 ANSWER 15 OF 39 CAPIUS COPYRIGHT 2005 ACS on STN

AB The compns. contain thermoplastic polyimides manufactured from H<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>O(C<sub>6</sub>H<sub>4</sub>O)C<sub>6</sub>H<sub>4</sub>NH<sub>2</sub> (I) and dianhydrides of (HO<sub>2</sub>C)Zr<sub>1</sub>(SiR<sub>2</sub>R<sub>3</sub>O)<sub>n</sub>SiR<sub>4</sub>SR<sub>6</sub>(CO<sub>2</sub>H)<sub>2</sub> (II; R<sub>1</sub>, R<sub>6</sub> = trivalent group; R<sub>2</sub>-R<sub>5</sub> = monovalent group; n = 0-20) and thermosetting resins. The film adhesives are useful for bonding semiconductor devices on supports. Thus, a film adhesive comprising m-1-11 dianhydride (R<sub>1</sub> = R<sub>6</sub> = C<sub>6</sub>H<sub>3</sub>, R<sub>2</sub>-R<sub>5</sub> = Me, n = 10) copolymer 100, Epilcon HP 7200H 20, and 2PHZ-PW 1 part showed peeling strength between a polyimide film and a Si chip 12 N/cm and good moisture resistance.

ACCESSION NUMBER: 2004:178185 CAPIUS  
DOCUMENT NUMBER: 140:200732  
TITLE: Adhesive resin compositions with good low-temperature adhesion, film-shaped adhesives using them, and semiconductor devices using them  
INVENTOR(S): Kinoshita, Hitoshi; Morita, Moriji  
PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.  
CODEN: JKOQAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004067718	A2	20040304	JP 2002-224690	20020801

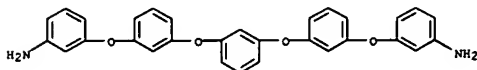
PRIORITY APPLN. INFO.: JP 2002-224690 20020801

IT 632330-99-5P  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (film adhesives good low-temperature adhesion for semiconductor device bonding)

RN 632330-99-5 CAPIUS  
CN Benzenamine, 3,3'-[1,3-phenylenebis(oxy-3,1-phenyleneoxy)]bis-, polymer with α-[(1,3-dihydro-1,3-dioxo-5-isobenzofuran-2-yl)dimethylsilyl]-α-[[1,3-dihydro-1,3-dioxo-5-isobenzofuran-2-yl)dimethylsilyl]oxy]poly[oxymethylene] (9CI) (CA INDEX NAME)

CH 1

CRN 500577-28-6  
CMF C30 H24 N2 O4



CH 2

CRN 137178-97-3  
CMF (C2 H6 O Si)n C20 H18 O7 S12  
CCI PMS

L26 ANSWER 16 OF 39 CAPIUS COPYRIGHT 2005 ACS on STN

AB The adhesive films have (A) adhesive polymer layers containing thermoplastic polymers and thermosetting resins and showing peeling strength when roll-bonded to mirror-faced Si at 20-110° ± 1 Ncm-1 and Tg of the uncured layers ≤ 40° and (B) adhesive polymer layers containing thermoplastic polymers and thermosetting resins and showing no stickiness at ≤ 50° and Tg of the uncured layers 40-150°. Thus, an adhesive film comprising (A) a layer prepared from Vamac GLS (ethylene-acrylate elastomer), HP 7200L (dicyclopentadiene-containing epoxy resin), YX 4000H (biphenyl-containing epoxy resin), and

DPP L (dicyclopentadiene-containing phenolic novolak resin) and (B) a layer containing HP 7200H (epoxy resin) and a polyimide prepared from 3,3'-[1,3-phenylenebis(oxy-3,1-phenyleneoxy)]bis(benzenamine), α,ω-bis(3-aminopropyl) poly(dimethylsiloxane), 4,4'-oxydiphthalic dianhydride, and ethylene glycol bis(trimellitate) dianhydride was bonded to a Si wafer at 100° on the A side, diced, and bonded to a substrate with improved adhesion.

ACCESSION NUMBER: 2004:159476 CAPIUS  
DOCUMENT NUMBER: 140:218893  
TITLE: Adhesive films, dicing tapes attached therewith, and method for bonding for semiconductor devices  
INVENTOR(S): Kinoshita, Hitoshi; Morita, Moriji  
PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.  
CODEN: JKOQAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004059859	A2	20040226	JP 2002-223352	20020731

PRIORITY APPLN. INFO.: JP 2002-223352 20020731

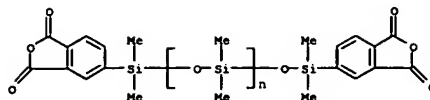
IT 632330-97-3P, 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,2-ethanediyl ester, polymer with α-[(3-aminopropyl)dimethylsilyl]-α-[[[(3-aminopropyl)dimethylsilyl]oxy]poly[oxymethylene]], 5,5'-oxybis[1,3-isobenzofurandione] and 3,3'-[1,3-phenylenebis(oxy-3,1-phenyleneoxy)]bis(benzenamine), block  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (2-layer adhesive films for bonding semiconductor wafers for semiconductor devices)

RN 632330-97-3 CAPIUS  
CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,2-ethanediyl ester, polymer with α-[(3-aminopropyl)dimethylsilyl]-α-[[[(3-aminopropyl)dimethylsilyl]oxy]poly[oxymethylene]], 5,5'-oxybis[1,3-isobenzofurandione] and 3,3'-[1,3-phenylenebis(oxy-3,1-phenyleneoxy)]bis(benzenamine), block (9CI) (CA INDEX NAME)

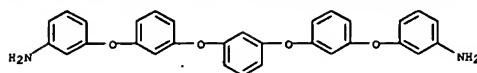
CH 1

CRN 500577-28-6  
CMF C30 H24 N2 O4

L26 ANSWER 15 OF 39 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)

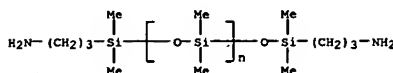


L26 ANSWER 16 OF 39 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)



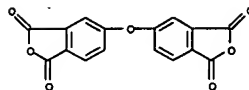
CH 2

CRN 97917-34-5  
CMF (C2 H6 O Si)n C10 H28 N2 O S12  
CCI PMS



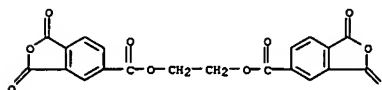
CH 3

CRN 1823-59-2  
CMF C16 H6 O7



CH 4

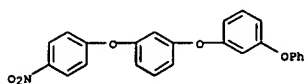
CRN 1732-96-3  
CMF C20 H10 O10





L26 ANSWER 17 OF 39 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB We report on the synthesis and characterization of a series of low molar mass, high aspect ratio ether-imide compds. All ether-imides were obtained by terminating the appropriate dianhydride, i.e., pyromellitic dianhydride (PMDA), 1,4,5,8-naphthalenetetracarboxylic dianhydride (NDA), 3,3',4,4'-biphenyltetracarboxylic dianhydride (BPDA), and 3,3',4,4'-oxydipthalic dianhydride (ODPA), with three flexible aryl-ether tails of different chain lengths. Increasing the number of meta-substituted aryl-ether units reduces the melt transition temps. and at the same time increases the solubility of the ether-imides. When the flexibility of the dianhydride moiety increases, the thermal behavior of the compds. becomes significantly more complex: The BPDA- and ODPA-based compds. form glasses and exhibit multiple crystal phases. Most compds. form isotropic melts upon heating; however, 2,7-bis-(4-phenoxy-phenyl)-benzo[1,2-b:4,5-b']diphenanthroline-1,3,6,8-tetraone (NDA-n0) displays a smectic A (SA)-type texture when cooled from the isotropic phase, followed by what appears to be a smectic phase with a columnar arrangement of the mesogens inside the layers. Single-crystal X-ray diffraction anal. and cyclic voltammetry expts. indicate that the wholly aromatic ether-imides NDA and BPDA could be excellent candidates for n-type semiconductor applications.

ACCESSION NUMBER: 2004:146725 CAPIUS  
 DOCUMENT NUMBER: 140:339870  
 TITLE: Wholly Aromatic Ether-Imides. Potential Materials for n-Type Semiconductors  
 AUTHOR(S): Dingemans, Theo J.; Picken, Stephen J.; Murthy, N. Sanjeeva; Mack, Paul; StClair, Terry L.; Samulski, Edward T.  
 CORPORATE SOURCE: ICASE Structures and Materials, NASA Langley Research Center, Hampton, VA, 23681-2199, USA  
 SOURCE: Chemistry of Materials (2004), 16(6), 966-974  
 CODEN: CMATEX; ISSN: 0897-4756  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 679837-32-2P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 ("tail" synthesis; thermal transitions and electrochem. behavior of wholly aromatic ether-imides)  
 RN 679837-32-2 CAPIUS  
 CN Benzene, 1-[3-(4-nitrophenoxy)phenoxy]-3-phenoxy- (9CI) (CA INDEX NAME)



IT 679837-71-9P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

L26 ANSWER 18 OF 39 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB The adhesive resins contain a polyimide resin prepared by reacting a diamine component containing H2N(C6H4O)4C6H4NH2 as essential component and an amino-terminated silicone with tetracarboxylic acid dianhydrides, and/or a silicone acid dianhydride. Film adhesives made by using the adhesive resin preferably together with a thermosetting resin (e.g., epoxy resin), and, if necessary, an inorg. filler are excellent in low-temperature adhesion, resistance to moisture absorption, heat resistance, and workability in adhesive bonding and are favorably usable as semiconductor-mounting materials for bonding semiconductor devices to substrates.

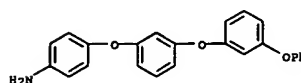
ACCESSION NUMBER: 2003:972122 CAPIUS  
 DOCUMENT NUMBER: 140:28460  
 TITLE: Adhesive resins and film adhesives for bonding semiconductor devices  
 INVENTOR(S): Kinoshita, Jin; Morita, Moritsugu; Mori, Minehiro; Kodama, Yoichi  
 PATENT ASSIGNEE(S): Mitsui Chemicals, Inc., Japan  
 SOURCE: PCT Int. Appl., 33 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003102049	A1	20031211	WO 2003-JP6776	20030529
W: CN, KR, PH, US				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
JP 2004010865	A2	20040115	JP 2002-170216	20020611
JP 2004051970	A2	20040219	JP 2003-153660	20030530
PRIORITY APPLN. INFO.:			JP 2002-156705	A 20020530
			JP 2002-170216	A 20020611

IT 578730-72-0P 632330-97-3P 632330-98-4P  
 632330-99-5P 632331-00-1P 632331-01-2P  
 632331-02-3P  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (heat- and moisture-resistant polyimide adhesives and film adhesives for semiconductor devices)  
 RN 578730-72-0 CAPIUS  
 CN 1,3-isobenzofurandione, 5,5'-carbonylbis-, polymer with  $\alpha$ -[3-(aminopropyl)dimethylsilyl]- $\omega$ -[3-(aminopropyl)dimethylsilyl]oxy]poly[oxy(dimethylsilylene)] and 3,3'-[1,3-phenylenebis(oxy-3,1-phenyleneoxy)]bis[benzenamine], block (9CI) (CA INDEX NAME)

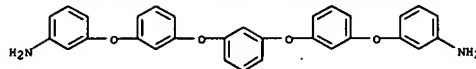
CM 1  
 CRN 500577-28-6  
 CMF C30 H24 N2 O4

L26 ANSWER 17 OF 39 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)  
 ("tail": thermal transitions and electrochem. behavior of wholly arom. ether-imides)  
 RN 679837-71-9 CAPIUS  
 CN Benzenamine, 4-[3-(3-phenoxyphenoxy)phenoxy]- (9CI) (CA INDEX NAME)

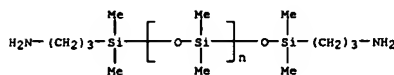


REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

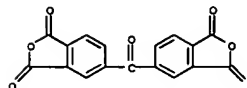
L26 ANSWER 18 OF 39 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)



CM 2  
 CRN 97917-34-5  
 CMF (C2 H6 O Si)n C10 H28 N2 O Si2  
 CCI PMS

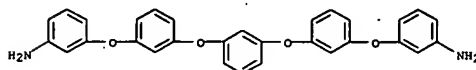


CM 3  
 CRN 2421-28-5  
 CMF C17 H6 O7



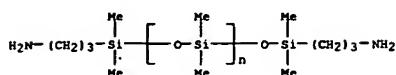
RN 632330-97-3 CAPIUS  
 CN 5-isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,2-ethanediyl ester, polymer with  $\alpha$ -[3-(aminopropyl)dimethylsilyl]- $\omega$ -[3-(aminopropyl)dimethylsilyl]oxy]poly[oxy(dimethylsilylene)] and 5,5'-oxybis[1,3-isobenzofurandione] and 3,3'-[1,3-phenylenebis(oxy-3,1-phenyleneoxy)]bis[benzenamine], block (9CI) (CA INDEX NAME)

CM 1  
 CRN 500577-28-6  
 CMF C30 H24 N2 O4



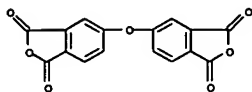
CM 2

CRN 97917-34-5  
 CMF (C2 H6 O Si)n C10 H28 N2 O Si2  
 CCI PMS



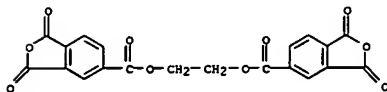
CM 3

CRN 1823-59-2  
 CMF C16 H6 O7



CM 4

CRN 1732-96-3  
 CMF C20 H10 O10



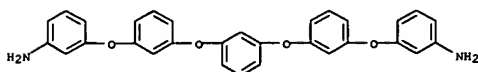
RN 632330-98-4 CAPLUS  
 CN [5,5'-Bis(benzofuran)-1,1',3,3'-tetrone, polymer with α-[(3-aminopropyl)dimethylsilyl]-m-[[[(3-aminopropyl)dimethylsilyl]oxy]poly[oxy(dimethylsilylene)], 5,5'-oxybis[1,3-isobenzofurandione] and 3,3'-[1,3-phenylenebis(oxy-3,1-phenyleneoxy)]bis(benzenamine), block (9CI) (CA INDEX NAME)

CM 1

CRN 500577-28-6  
 CMF C30 H24 N2 O4

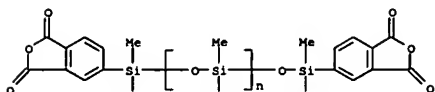
CM 1

CRN 500577-28-6  
 CMF C30 H24 N2 O4



CM 2

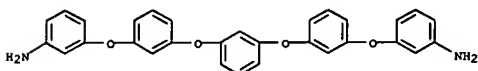
CRN 137178-97-3  
 CMF (C2 H6 O Si)n C20 H18 O7 Si2  
 CCI PMS



RN 632331-00-1 CAPLUS  
 CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,2-ethanediyl ester, polymer with α-[(3-aminopropyl)dimethylsilyl]-m-[[[(3-aminopropyl)dimethylsilyl]oxy]poly[oxy(dimethylsilylene)] and 3,3'-[1,3-phenylenebis(oxy-3,1-phenyleneoxy)]bis(benzenamine), block (9CI) (CA INDEX NAME)

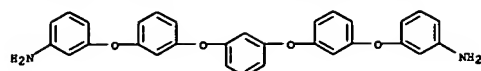
CM 1

CRN 500577-28-6  
 CMF C30 H24 N2 O4



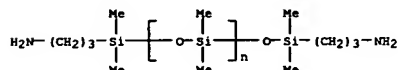
CM 2

CRN 97917-34-5  
 CMF (C2 H6 O Si)n C10 H28 N2 O Si2  
 CCI PMS



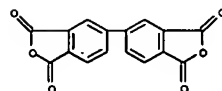
CM 2

CRN 97917-34-5  
 CMF (C2 H6 O Si)n C10 H28 N2 O Si2  
 CCI PMS



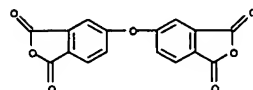
CM 3

CRN 2420-97-3  
 CMF C16 H6 O6

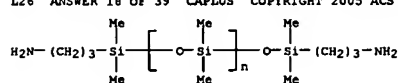


CM 4

CRN 1823-59-2  
 CMF C16 H6 O7

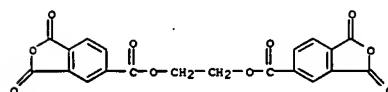


RN 632330-99-5 CAPLUS  
 CN Benzenamine, 3,3'-[1,3-phenylenebis(oxy-3,1-phenyleneoxy)]bis-, polymer with α-[[[(1,3-dihydro-1,3-dioxo-5-isobenzofuranyl)dimethylsilyl]-m-[[[(1,3-dihydro-1,3-dioxo-5-isobenzofuranyl)dimethylsilyl]oxy]poly[oxy(dimethylsilylene)] (9CI) (CA INDEX NAME)



CM 3

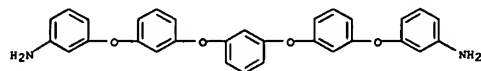
CRN 1732-96-3  
 CMF C20 H10 O10



RN 632331-01-2 CAPLUS  
 CN 1,3-Isobenzofurandione, 5,5'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bis-, polymer with α-[(3-aminopropyl)dimethylsilyl]-m-[[[(3-aminopropyl)dimethylsilyl]oxy]poly[oxy(dimethylsilylene)] and 3,3'-[1,3-phenylenebis(oxy-3,1-phenyleneoxy)]bis(benzenamine), block (9CI) (CA INDEX NAME)

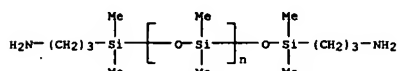
CM 1

CRN 500577-28-6  
 CMF C30 H24 N2 O4

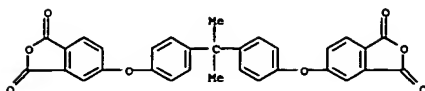


CM 2

CRN 97917-34-5  
 CMF (C2 H6 O Si)n C10 H28 N2 O Si2  
 CCI PMS

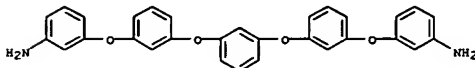


CRN 38103-06-9  
CHF C31 H20 O8

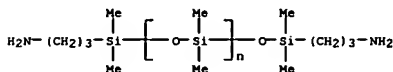


RN 632331-02-3 CAPLUS  
CN 1,3-isobenzofurandione, 5,5'-oxybis-, polymer with  $\alpha$ -[[(3-aminopropyl)dimethylsilyl]- $\alpha$ -[[(3-aminopropyl)dimethylsilyl]oxy]poly[oxy(dimethylsilylene)] and 3,3'-[1,3-phenylenebis(oxy-3,1-phenyleneoxy)]bis[benzenamine], block (9CI) (CA INDEX NAME)

CM 1  
CRN 500577-28-6  
CHF C30 H24 N2 O4



CM 2  
CRN 97917-34-5  
CHF (C2 H6 O Si)n C10 H28 N2 O Si2  
CCI PMS



CM 3  
CRN 1823-59-2  
CHF C16 H6 O7

AB Title laminates are prepared from copper foils having supporting metal layers and release layers and thermoplastic polyimides comprising 1,3-bis(3-(3-aminophenoxy)phenoxy)benzene and 21 tetracarboxylic acid anhydrides selected from 3,3',4,4'-diphenyl ether tetracarboxylic dianhydride, 3,3',4,4'-benzophenonetetracarboxylic dianhydride, pyromellitic dianhydride, and 3,3',4,4'-biphenyltetracarboxylic dianhydride. Thus, 20 mol 1,3-bis(3-(3-aminophenoxy)phenoxy)benzene and 19.4 mol 3,3',4,4'-benzophenonetetracarboxylic dianhydride were polymerized at 23° for 8 h to give a polyamic acid solution with viscosity at 25° 400 cps, which was applied on a Kapton EN polyimide film, and laminated with Microthin M having supporting copper foil to give a polyimide copper-clad laminate (copper foil supporter/thin copper foil/thermoplastic polyimide/nonthermoplastic polyimide), which was annealed at 150° for 4 h under 10 Kgf/cm<sup>2</sup>, showing peel strength 0.03 N/mm between copper foil supporter and thin copper foil and 1.5 N/mm between thin copper foil and thermoplastic polyimide.

ACCESSION NUMBER: 2003:936476 CAPLUS  
DOCUMENT NUMBER: 140:5896  
TITLE: Polyimide copper-clad laminates using very thin copper

INVENTOR(S): foil and their production method  
Hirota, Koji; Mori, Minehiro  
PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
CODEN: JKXXAF

DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

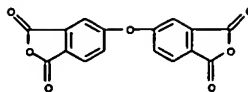
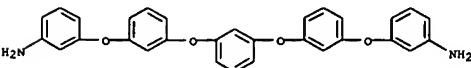
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003340963	A2	20031202	JP 2002-155167	20020529
PRIORITY APPLN. INFO.:			JP 2002-155167	20020529

IT 500577-35-5P

RI: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
(preparation of polyimide copper-clad laminates)

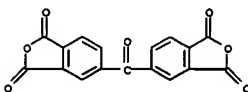
RN 500577-35-5 CAPLUS  
CN 1,3-isobenzofurandione, 5,5'-carbonylbis-, polymer with 3,3'-[1,3-phenylenebis(oxy-3,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1  
CRN 500577-28-6  
CHF C30 H24 N2 O4



REFERENCE COUNT: 3  
THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT

CM 2  
CRN 2421-28-5  
CHF C17 H6 O7



AB Polyimide resin composition with good adhesive property at low temperature and high moisture-resistance, which is ideal for heat-resistant adhesive, is composed of 70-99 weight% polyimide that is prepared from an aromatic diamine and a tetracarboxylic anhydride, and 1-30 weight% bismaleimide compds. Polyimide films, adhesive insulating tapes, and metal laminates can be prepared from the above polyimide composition. Thus, 1,3-bis(3-(3-aminophenoxy)phenoxy)benzene, N,N-dimethylacetamide, and 3,3',4,4'-benzophenone tetracarboxylic anhydride were polymerized and mixed with 10 weight% 1,3-bis(3-maleimidephenoxy)benzene (APB BMI) to receive a polyamic acid solution, which was cast and cyclodehydrated on glass plate to obtain polyimide film, or cast and cyclodehydrated on copper foil to provide a metal laminate.

ACCESSION NUMBER: 2003:889904 CAPIUS  
DOCUMENT NUMBER: 139:365806  
TITLE: Bismaleimide compound-containing polyimide resin composition and its applications  
INVENTOR(S): Kodama, Yoichi; Mori, Minehiro  
PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.  
CODEN: JKOXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

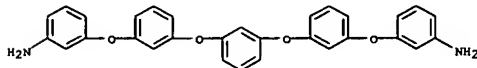
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003321608	A2	20031114	JP 2002-128966	20020430
PRIORITY APPLN. INFO.:			JP 2002-128966	20020430

IT 500577-35-5P  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (bismaleimide compound-containing polyimide resin composition for metal laminates, adhesive insulation tapes, and films)

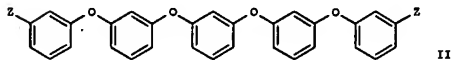
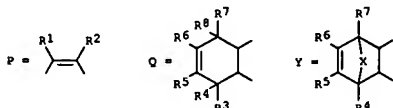
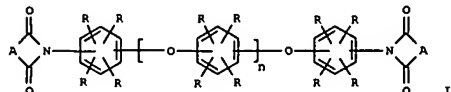
RN 500577-35-5 CAPIUS  
CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with 3,3'-[1,3-phenylenebis(oxy-3,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1

CRN 500577-28-6  
CMF C30 H24 N2 O4



GI



AB Title compds., imparting high impact resistance and rigidity on polymers, are I (R = H, halo, hydrocarbyl; A = P, Q, Y; R1-R8 = H, halo, lower alkoxy, hydrocarbyl; X = C1-2 alkylene, O; n = 2-7; when n = 2, N and/or

O bonded to benzene rings are on o- or m-position). Thus, II (Z = NH2) was treated with maleic anhydride in the presence of 1,3-dimethyl-2-imidazolidine to give 90% II (Z = NH2).

2,5-dioxo-2,5-dihydro-1H-1-pyrrol-1-yl).  
ACCESSION NUMBER: 2003:771509 CAPIUS  
DOCUMENT NUMBER: 139:277530  
TITLE: Bismaleimides as crosslinking agents and additives for

polymers and their manufacture  
INVENTOR(S): Kawaguchi, Masaru; Nagai, Tadaaki  
PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKOXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

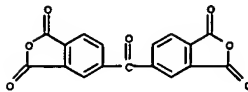
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003277360	A2	20031002	JP 2002-365379	20021217
PRIORITY APPLN. INFO.:			JP 2002-6928	A 20020116

OTHER SOURCE(S): MARPAT 139:277530

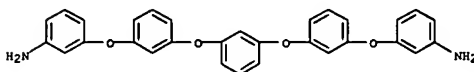
IT 500577-28-6  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(manufacture of bismaleimides as crosslinking agents and additives for

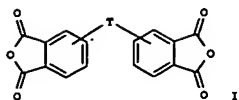
CM 2

CRN 2421-28-5  
CMF C17 H6 O7



polymers)  
RN 500577-28-6 CAPIUS  
CN Benzenamine, 3,3'-[1,3-phenylenebis(oxy-3,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)





AB The laminate for semiconductor packages, etc., has a layer of thermoplastic polyimides prepared from diamines containing 1,3-bis(3-(3-aminophenoxy)phenoxy)benzene a, H<sub>2</sub>KR1S1R3R4(OS1R5R6)mR2NH<sub>2</sub> (R1, R2 = divalent C1-4 aliphatic or aromatic; R3-R6 = monovalent aliphatic or aromatic; m = 1-20) b, and other diamines c mol and acid dianhydrides containing d mol of dianhydrides I (T = CO, COC6H4CO, OC6H4COC6H4CO) and e mol of other dianhydrides while satisfying (a + b)/(a + b + c) = 0.5-1.0; 0 < a/(a + b) < 1.0; 0 < d/(d + e) ≤ 1.0; and 0.9 ≤ (d + e)/(a + b + c) < 1.0. Thus, 1,3-bis(3-(3-aminophenoxy)phenoxy)benzene 0.0100, BY 16-871EG (diaminosiloxane), and 3,3',4,4'-benzophenonetetracarboxylic dianhydride were reacted to give a polyamic acid solution, which was cast on SLP 18

(Cu foil) and heated to give a polyimide-Cu laminate. The laminate was press-bonded at 150° with another Cu foil to give a test piece showing 90°-peeling strength 1.52 kg/cm.

ACCESSION NUMBER: 2003:646649 CAPLUS  
DOCUMENT NUMBER: 139:181148  
TITLE: Metal-thermoplastic polyimide laminate with good low-temperature bondability and solder heat resistance  
resistance  
INVENTOR(S): Kodama, Yoichi; Mori, Minehiro  
PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
CODEN: JGQCAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

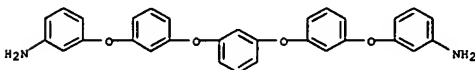
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003231208	A2	20030819	JP 2002-28244	20020205
PRIORITY APPLN. INFO.:			JP 2002-28244	20020205

IT 500577-28-6DP, polymers with diaminosiloxanes and acid dianhydrides 578730-72-0P 578730-73-1P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(metal/thermoplastic polyimide-polysiloxane laminate with good low-temperature bondability and solder heat resistance)

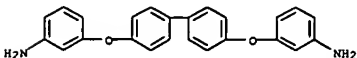
RN 500577-28-6 CAPLUS  
CN Benzenamine, 3,3'-(1,3-phenylenebis(oxy-3,1-phenyleneoxy))bis- (9CI) (CA INDEX NAME)

RN 578730-73-1 CAPLUS  
CN 5-isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,2-ethanediyl ester, polymer with α-((3-aminopropyl)dimethylsilyl)-ω-(((3-aminopropyl)dimethylsilyl)oxy)poly(oxy(dimethylsilylene)), 3,3'-(1,1'-biphenyl)-4,4'-diylbis(oxy))bis(benzenamine), 5,5'-carbonylbis(1,3-isobenzofurandione) and 3,3'-(1,3-phenylenebis(oxy-3,1-phenyleneoxy))bis(benzenamine) (9CI) (CA INDEX NAME)

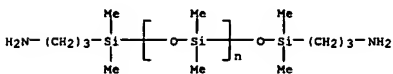
CM 1

CRN 500577-28-6  
CMF C30 H24 N2 O4

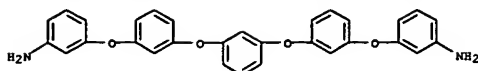
CM 2

CRN 105112-76-3  
CMF C24 H20 N2 O2

CM 3

CRN 97917-34-5  
CMF (C2 H6 O Si)n C10 H28 N2 O Si2  
CCI PMS

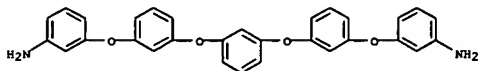
CM 4

CRN 2421-28-5  
CMF C17 H6 O7

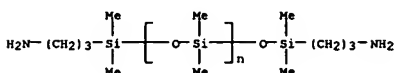
RN 578730-72-0 CAPLUS  
CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with α-((3-aminopropyl)dimethylsilyl)-ω-(((3-aminopropyl)dimethylsilyl)oxy)poly(oxy(dimethylsilylene)) and 3,3'-(1,3-phenylenebis(oxy-3,1-phenyleneoxy))bis(benzenamine), block (9CI)

(CA INDEX NAME)

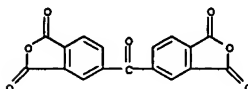
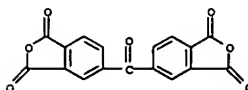
CM 1

CRN 500577-28-6  
CMF C30 H24 N2 O4

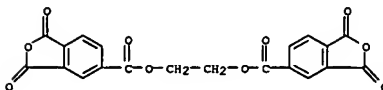
CM 2

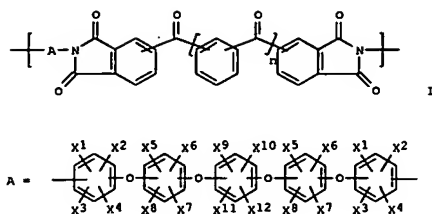
CRN 97917-34-5  
CMF (C2 H6 O Si)n C10 H28 N2 O Si2  
CCI PMS

CM 3

CRN 2421-28-5  
CMF C17 H6 O7

CM 5

CRN 1732-96-3  
CMF C20 H10 O10



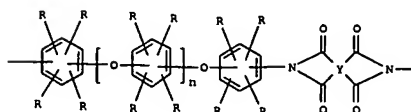
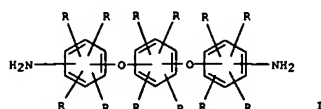
AB The laminate for semiconductor packaging, has a layer containing thermoplastic polyimides having repeating units I (X1-X12 = H, hydrocarbyl; n = 0, 1) on at least one side of a metal foil. Thus, a polyamic acid solution prepared from 1,3-bis(3-(3-aminophenoxy)phenoxy)benzene and 3,3',4,4'-benzophenonetetracarboxylic dianhydride was cast on SLP 105WB (Cu foil) and heated to give a laminate, which was hot-pressed with 42 Alloy at 200° to give a test piece showing 90°-peeling strength 2.34 kg/cm.

ACCESSION NUMBER: 2003:460356 CAPIUS  
DOCUMENT NUMBER: 139:37596  
TITLE: Metal-polyimide laminate with good low-temperature adhesion and solder heat resistance  
INVENTOR(S): Kodama, Yoichi; Mori, Minehiro  
PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.  
CODEN: JKKKAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003170528	A2	20030617	JP 2001-369566	20011204

PRIORITY APPLN. INFO.: JP 2001-369566 20011204

IT 500577-35-5P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(metal foil-polyoxyarylene-polyimide laminate with good low-temperature adhesion and solder heat resistance for semiconductor packaging)  
RN 500577-35-5 CAPIUS

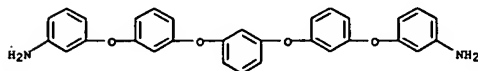


AB The aromatic diamine compound having a formula I and a polyimide having a repeating unit represented by the following formula II, which has low-temperature adherability, are prepared, where n is an integer of 3-7, R is independently an atom or a group selected from the group consisting of a H, a halogen atom and a hydrocarbyl group, the same or different two hetero atoms selected from N and O bonded to each benzene ring are at the ortho- or meta-positions to each other on at least one benzene ring, and when n is 3, the hetero atoms are at the ortho- or meta-positions to each other on all the benzene rings and Y is a tetravalent organic group.

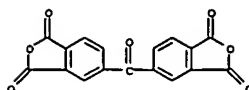
ACCESSION NUMBER: 2003:172561 CAPIUS  
DOCUMENT NUMBER: 138:222013  
TITLE: Novel aromatic diamine and polyimide  
INVENTOR(S): Kodama, Yoichi; Mori, Minehiro; Nagai, Naoshi; Kawaguchi, Masaru  
PATENT ASSIGNEE(S): Mitsui Chemicals, Inc., Japan  
SOURCE: Eur. Pat. Appl., 24 pp.  
CODEN: EPXKDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1288191	A2	20030305	EP 2002-19705	20020902
EP 1288191	A3	20030702		

CH 1  
CRN 500577-28-6  
CHF C30 H24 N2 O4



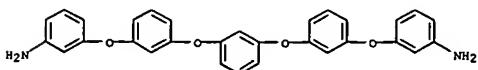
CH 2  
CRN 2421-28-5  
CHF C17 H6 O7



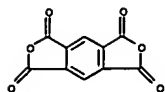
JP 2003231753	A2	20030819	JP 2002-243952	20020823
JP 2004002265	A2	20040108	JP 2002-247130	20020827
CN 1403438	A	20030319	CN 2002-142274	20020829
US 2003092870	A1	20030515	US 2002-232744	20020903
US 6737503	B2	20040518		
US 2004082754	A1	20040429	US 2003-718532	20031124
			JP 2001-267218	A 20010904
			JP 2001-332664	A 20011030
			JP 2002-101107	A 20020403
			JP 2001-369100	A 20011203
			JP 2001-369101	A 20011203
			US 2002-232744	A3 20020903

OTHER SOURCE(S): MARPAT 138:222013  
IT 500577-31-1P 500577-33-3P 500577-35-5P  
500577-37-7P 500577-39-9P 500577-43-5P  
RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
(synthesis of novel aromatic diamines and polyimides having low-temperature adherability)  
RN 500577-31-1 CAPIUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 3,3'-(1,3-phenylenebis(oxy-3,1-phenyleneoxy))bis(benzenamine) (9CI) (CA INDEX NAME)

CH 1  
CRN 500577-28-6  
CHF C30 H24 N2 O4



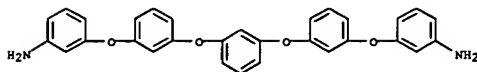
CH 2  
CRN 89-32-7  
CHF C10 H2 O6



RN 500577-33-3 CAPIUS  
CN [5,5'-Bis(benzofuran-2-ylidene)-1,3-phenylenebis(oxo-3,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

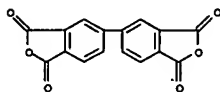
CM 1

CRN 500577-28-6  
CMF C30 H24 N2 O4



CM 2

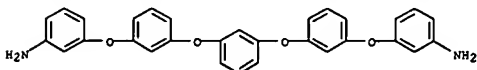
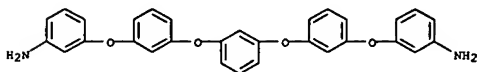
CRN 2420-87-3  
CMF C16 H6 O6



RN 500577-35-5 CAPIUS  
CN 1,3-Isobenzofurandione, 5,5'-(1,3-phenylenebis(oxo-3,1-phenyleneoxy))bis(benzenamine) (9CI) (CA INDEX NAME)

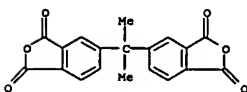
CM 1

CRN 500577-28-6  
CMF C30 H24 N2 O4



CM 2

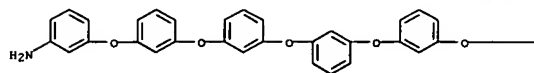
CRN 1779-17-5  
CMF C19 H12 O6



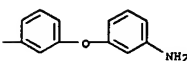
RN 500577-43-5 CAPIUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 3,3'-(1,3-phenylenebis(oxo-3,1-phenyleneoxy))bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1

CRN 500577-30-0  
CMF C42 H32 N2 O6



PAGE 1-A



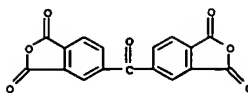
PAGE 1-B

CM 2

CRN 89-32-7  
CMF C10 H2 O6

CM 2

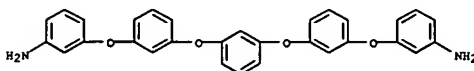
CRN 2421-28-5  
CMF C17 H6 O7



RN 500577-37-7 CAPIUS  
CN 1,3-Isobenzofurandione, 5,5'-(1,3-phenylenebis(oxo-3,1-phenyleneoxy))bis(benzenamine) (9CI) (CA INDEX NAME)

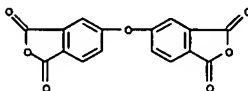
CM 1

CRN 500577-28-6  
CMF C30 H24 N2 O4



CM 2

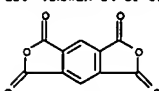
CRN 1823-59-2  
CMF C16 H6 O7



RN 500577-39-9 CAPIUS  
CN 1,3-Isobenzofurandione, 5,5'-(1-methylethylidene)bis-, polymer with 3,3'-(1,3-phenylenebis(oxo-3,1-phenyleneoxy))bis(benzenamine) (9CI) (CA INDEX NAME)

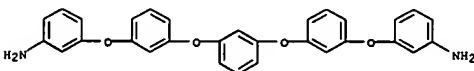
CM 1

CRN 500577-28-6  
CMF C30 H24 N2 O4

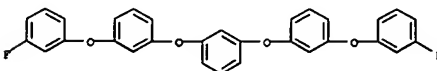


IT 500577-28-6P 500577-29-7P 500577-30-0P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation);  
RACT (Reactant or reagent)  
(synthesis of novel aromatic diamines and polyimides having low-temperature adherability)

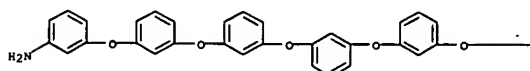
RN 500577-28-6 CAPIUS  
CN Benzenamine, 3,3'-(1,3-phenylenebis(oxo-3,1-phenyleneoxy))bis- (9CI) (CA INDEX NAME)



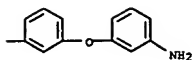
RN 500577-29-7 CAPIUS  
CN Benzene, 1,3-bis[3-(3-fluorophenoxy)phenoxy]- (9CI) (CA INDEX NAME)



RN 500577-30-0 CAPIUS  
CN Benzenamine, 3,3'-(1,3-phenylenebis(oxo-3,1-phenyleneoxy-3,1-phenyleneoxy))bis- (9CI) (CA INDEX NAME)

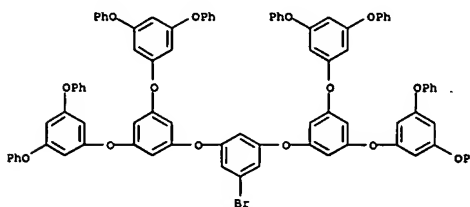


PAGE 1-A



L26 ANSWER 25 OF 39 CAPIUS COPYRIGHT 2005 ACS on STN  
AB Cyclo-dendritic hybrid macromols. were synthesized using preformed blocks of hydroxymethyl crown ethers and poly(benzyl ether) dendrons. The synthesis is based on phase-transfer reaction of 2-hydroxymethyl crown ether (12-crown-6, 15-crown-5, 18-crown-6) and dendritic bromides G-2 to G-4, using NaH (strong base) in THF or DMF. The products of the G-2 to G-4 dendritic bromides are heavy oils and those of higher generations are white foamy glassy solids. The ring size of the crown ethers did not affect the nucleophilicity and all showed similar reactivity. A change from flat, two-dimensional geometry of G-2 to the globular shape of G-4 affects slightly the reactivity of the dendritic wedges but the focal point functionalities are still readily accessible for nucleophilic

attack  
in the fourth generation.  
ACCESSION NUMBER: 2000:104477 CAPIUS  
DOCUMENT NUMBER: 132:294104  
TITLE: Synthesis of new hybrid macromolecules with cyclo-dendritic architecture  
AUTHOR(S): Gitsov, Ivan; Ivanova, Pavlina T.  
CORPORATE SOURCE: Dep. Chem. Chemical Biol. & Cornell Cent. Mater. Res.,  
SOURCE: Cornell University, Ithaca, NY, 14853, USA  
Chemical Communications (Cambridge) (2000), (4), 269-270  
CODEN: CHCOFS; ISSN: 1359-7345  
PUBLISHER: Royal Society of Chemistry  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
IT 264883-35-4  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of cyclo-dendrimers from crown ethers and poly(benzyl ether))  
bromide dendrons via phase transfer reaction with sodium hydride)  
RN 264883-35-4 CAPIUS  
CN Benzene, 1,3-bis[3,5-bis(3,5-diphenoxyphenoxy)phenoxy]-5-bromo- (9CI)  
(CA INDEX NAME)



REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT

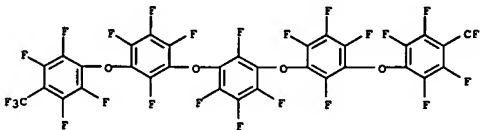
L26 ANSWER 26 OF 39 CAPIUS COPYRIGHT 2005 ACS on STN  
AB Perfluoro(4-phenoxy-2,5-cyclohexadienone) reacts with sodium 4-nitro- and 4-methoxycarbonylphenoxides in glyme at 65°C to give the corresponding 2,4,6-trifluoro-3,5-bis(aryloxy)-4-[2,4,6-trifluoro-3,5-bis(aryloxy)phenoxy]-2,5-cyclohexadienones. Reduction of the latter to phenols, followed by reaction with perfluorotoluene, results in formation of branched polyfluorinated polyphenyl ethers containing NO<sub>2</sub> and CO<sub>2</sub>CH<sub>3</sub> functional groups. Reduction of the dinitro polyphenyl ether yields the corresponding diamino derivative. A similar reaction sequence gives rise

to a linear polyphenyl ether, starting from  
6-chloro-2,3,4,5,6-pentafluoro-2,4-cyclohexadien-1-one and tetrafluoroethanol.

ACCESSION NUMBER: 1999:513659 CAPIUS  
DOCUMENT NUMBER: 131:257279  
TITLE: Synthesis of fluorinated polyphenyl ethers by reaction  
of polyfluorinated cyclohexadienones with substituted phenols  
AUTHOR(S): Kovtonyuk, V. N.; Kobrina, L. S.  
CORPORATE SOURCE: Novosibirsk Institute of Organic Chemistry, Siberian Division, Russian Academy of Sciences, Novosibirsk, 630090, Russia  
SOURCE: Russian Journal of Organic Chemistry (Translation of Zhurnal Organicheskoi Khimii) (1999), 35(1), 74-79  
CODEN: RJOCEQ; ISSN: 1070-4280  
PUBLISHER: MAIK Nauka/Interperiodica Publishing  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
IT 245126-36-7P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of fluorinated polyphenyl ethers by reaction of polyfluorinated cyclohexadienones with phenols)

RN 245126-36-7 CAPIUS  
CN Benzene, 1,2,3,5-tetrafluoro-4,6-bis[2,4,5,6-tetrafluoro-3-(2,3,5,6-tetrafluoro-4-(trifluoromethyl)phenoxy)phenoxy]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT



L26 ANSWER 27 OF 39 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB Title polyimides having 2,2',5,5',6,6'-hexafluorobiphenyl-3,3',4,4'-tetracarboxylic imide units are prepared Laminated boards have films of the polyimides with excellent heat resistance and low thermal expansion, dielec. constant, birefringence, and H2O absorption. Thus, p-phenylenediamine was treated with equimolar 2,2',5,5',6,6'-hexafluorobiphenyl-3,3',4,4'-tetracarboxylic acid dianhydride at a room temperature for 8 h in N-methyl-2-pyrrolidone to obtain a poly(amic acid) solution with logarithmic viscosity 0.40. It was applied on a glass sheet and then heated to give a film showing Tg 2450°, sp. inductive capacity 3.1 e, linear expansion coefficient 1.0, birefringence 0.00083 ANxy, and water absorption 1.24%.

ACCESSION NUMBER: 1999:134401 CAPIUS  
 DOCUMENT NUMBER: 130:210630  
 TITLE: Fluorine-containing polyimides, laminated boards therefrom, and poly(amic acid) solutions therefor  
 INVENTOR(S): Yamamoto, Tomohiko; Tsunimiyama, Tatsuo; Sugimoto, Koji  
 PATENT ASSIGNEE(S): Ube Industries, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKOXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

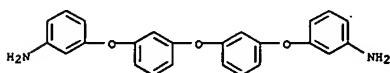
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11049855	A2	19990223	JP 1997-210606	19970805
US 6040418	A	20000321	US 1998-128665	19980804
PRIORITY APPLN. INFO.:			JP 1997-210606	19970805

IT 220944-81-0P  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyimides having hexafluorobiphenyltetracarboximide group with good heat and water resistance and low thermal expansion, dielec. constant, and birefringence)

RN 220944-81-0 CAPIUS  
 CN [5,5'-Bis(isobenzofuran)-1,1',3,3'-tetrone, 4,4',6,6',7,7'-hexafluoro-, polymer with 3,3'-[oxybis(3,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)]

CM 1

CRN 217182-71-3  
 CMF C24 H20 N2 O3



CM 2

L26 ANSWER 28 OF 39 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB The title composition contains a polymer and a sensitizer, wherein the polymer contains (A) an acid dianhydride component of an average electron affinity 1.40-2.05 eV containing 3, 3', 4, 4' diphenylsulfone tetracarboxylic dianhydride 550 mol% of the total acid dianhydride component, (B) an diamine component of an average ionizing potential 7.15-7.45 eV containing an aromatic diamine 20-70 mol% of the total diamine component, wherein the aromatic diamine has a Cl-10 organic group fluoro-organic group, Cl, F, Br or I on the ortho position of the amino group, and (C) the difference of the ionizing potential of the diamine component and the electron affinity of the acid dianhydride component being in the range of 5.45-5.85 eV. The precursor composition can be exposed i or g ray of the Hg lamp.

ACCESSION NUMBER: 1998:744796 CAPIUS  
 DOCUMENT NUMBER: 130:59061  
 TITLE: Photosensitive polyimide precursor composition  
 INVENTOR(S): Tomikawa, Masao; Yoshimura, Toshio; Miura, Yasuo  
 PATENT ASSIGNEE(S): Toray Industries, Inc., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.  
 CODEN: JKOXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

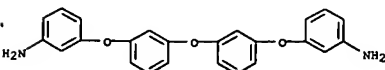
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10301281	A2	19981113	JP 1998-43617	19980225
PRIORITY APPLN. INFO.:			JP 1997-40628	19970225

IT 217182-72-4P  
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (photosensitive polyimide precursor composition containing specified acid dianhydride component and diamine component)

RN 217182-72-4 CAPIUS  
 CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 5,5'-carbonylbis[1,3-isobenzofurandione], 4,4'-methylenbis[2-ethyl-6-methylbenzenamine] and 3,3'-[oxybis(3,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)]

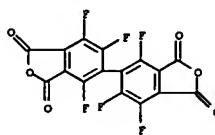
CM 1

CRN 217182-71-3  
 CMF C24 H20 N2 O3



L26 ANSWER 27 OF 39 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)

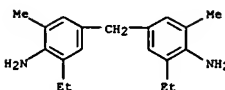
CRN 23266-67-3  
 CMF C16 F6 O6



L26 ANSWER 28 OF 39 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)

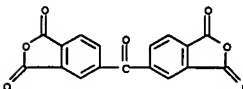
CM 2

CRN 19900-72-2  
 CMF C19 H26 N2



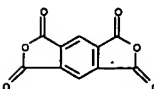
CM 3

CRN 2421-28-5  
 CMF C17 H6 O7



CM 4

CRN 89-32-7  
 CMF C10 H2 O6



\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The title photoreceptors comprise a conductive support coated with a photosensitive layer containing a bisazo compound I (K1, K2 = OH-containing coupler residue having a group with coupling ability, 1 of K1 and K2 is II (Y = divalent N-contg heterocycle which may be substituted, divalent aromatic hydrocarbon which may be substituted); X = divalent group having 22 groups selected from III and IV; R1, R2 = H, halo, (substituted) alkyl, (substituted) alkoxy, (substituted) aryl; the benzene rings A, B, and C may have substituents). The photoreceptors show high photosensitivity and good durability in repeated use. Thus, an Al vapor-deposited polyester film was coated with a charge-generating layer containing V and with a charge-transporting layer containing a hydrazone compound to give a photoreceptor.

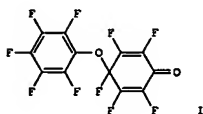
ACCESSION NUMBER: 1995:849478 CAPIUS  
DOCUMENT NUMBER: 124:215963  
TITLE: Electrophotographic photoreceptors using novel bisazo compound  
INVENTOR(S): Rin, Mamoru; Tanaka, Noriko  
PATENT ASSIGNEE(S): Mitsubishi Kagaku KK, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JTOOQAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07168378	A2	19950704	JP 1993-316552	19931216

PRIORITY APPL. INFO.: JP 1993-316552 19931216

IT 170893-89-7  
RL: DEV (Device component use); USES (Uses)  
(electrophotog. photoreceptor containing bisazo compound as charge-generating agent)

RN 170893-89-7 CAPIUS  
CN 2-Anthracenecarboxamide, 4-([3-[3-[3-[3-[10-, 11 or 12)-chloro-5-hydroxy-7-oxo-7H-benzimidazo[2,1-a]benz[de]isoquinolin-4-yl]azo]phenoxy]phenoxy]phenoxy]phenyl)azo]-3-hydroxy-N-phenyl- (9CI) (CA INDEX NAME)



AB Reaction of perfluorinated cyclohexadienone I with C6F5ONa in MeCN or with PhOH or 3,5-(C6F5O)2C6F3OH in MeCN containing K2CO3 at 20° gave 71-86% products of substitution of I in the 3- and 5-positions of the diene ring, which isomerize upon heating. Reaction of I with phenols and K2CO3 in MeCN at 70° gave products in which 4 F atoms at positions 3 and 5 in the diene ring and 3 and 5 in the aromatic ring were substituted.

Reduction with Na2S2O4 of the tetrakis(aryloxy)dienones thus obtained gave 63-94% fluorinated 3,5-bis(aryloxy)phenols, which reacted with C6F6 to give 1,3,5-trisubstituted fluorinated polyphenyl ethers.

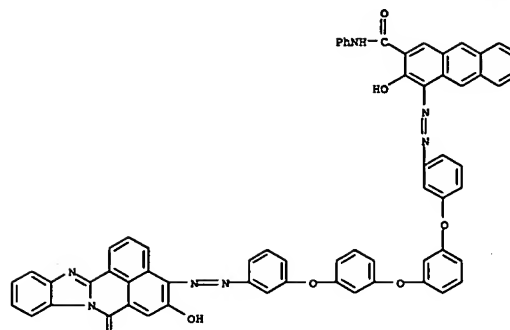
ACCESSION NUMBER: 1992:235168 CAPIUS  
DOCUMENT NUMBER: 116:235168  
TITLE: Nucleophilic substitution of a fluorine atom in perfluoro(phenoxycyclohexadienones). Synthesis of 1,3,5-trisubstituted fluorine-containing polyphenyl ethers

AUTHOR(S): Kovtonyuk, V. N.; Kobrina, L. S.  
CORPORATE SOURCE: Novosib. Inst. Org. Khim., Novosibirsk, USSR  
SOURCE: Zhurnal Organicheskoi Khimii (1991), 27(11), 2289-97  
CODEN: ZORKAE; ISSN: 0514-7492  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian  
OTHER SOURCE(S): CASREACT 116:235168

IT 141215-99-8P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and etherification of, with hexafluorobenzene)

RN 141215-99-8 CAPIUS  
CN Phenol, 2,4,6-trifluoro-3,5-bis[2,4,6-trifluoro-3,5-bis(pentafluorophenoxy)phenoxy]- (9CI) (CA INDEX NAME)

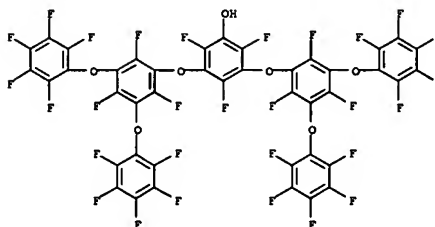
PAGE 1-A



PAGE 2-A

||  
O

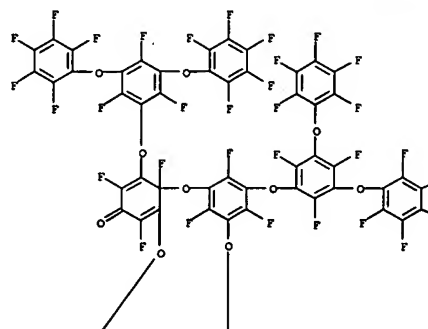
D1-C1



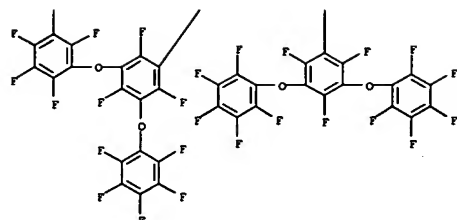
IT 141215-97-6P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and reduction of)

RN 141215-97-6 CAPIUS  
CN 2,5-Cyclohexadien-1-one, 2,4,6-trifluoro-3,5-bis[2,4,6-trifluoro-3,5-bis(pentafluorophenoxy)phenoxy]-4-[2,4,6-trifluoro-3,5-bis[2,4,6-trifluoro-3,5-bis(pentafluorophenoxy)phenoxy]phenoxy]- (9CI) (CA INDEX NAME)

PAGE 1-A

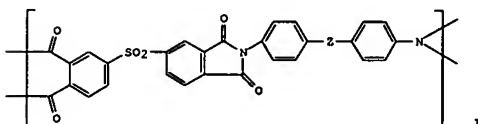


- F  
- F



PAGE 2-A

IT 141216-01-5P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)  
RN 141216-01-5 CAPIUS  
CN Benzene, 1,3,5-trifluoro-2-(pentafluorophenoxy)-4,6-bis[2,4,6-trifluoro-3,5-bis(pentafluorophenoxy)phenoxy]- (9CI) (CA INDEX NAME)



AB The title comps. with good heat resistance and elec. and mech. characteristics contain polyimides of repeating unit I (Z = S, SC6H4s, CH4C6H4CMe2, XC6H4YC6H4X; X = O, S, CR1R2; Y = direct bond, O, S, SO2, CR1R2, CO; R1, R2 = H, halogen, C1-5 haloalkyl) and intrinsic viscosity 0.3-5.0 dl/g, dissolved in organic solvent(s), and prepared by imidation in an aprotic polar organic solvent and/or phenolic solvent. 4,4'-Bis(p-aminophenoxy)diphenyl sulfone was polymerized with di-Ph sulfone-3,3',4,4'-tetracarboxylic dianhydride in N-methylpyrrolidone at 25-30° for 1 h then heated at 160° for 5 h to give a polyimide solution. The polyimide had intrinsic viscosity (5 g/100 mL N-methylpyrrolidone, 25°) 0.7, decomposition temperature 565°, softening temperature 285°, tensile strength 12.2 kg/mm2, and modulus 271 kg/mm2.

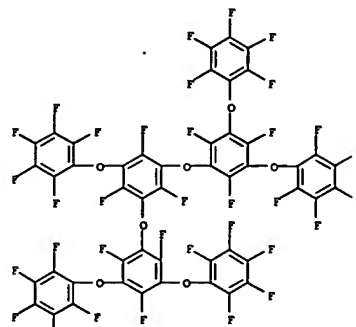
ACCESSION NUMBER: 1989:458573 CAPIUS  
DOCUMENT NUMBER: 111:58573  
TITLE: Soluble polyimide composition and its manufacture  
INVENTOR(S): Ikeda, Tsuyoshi; Sanami, Hiroshi; Nakazawa, Mikio;  
Kawashima, Yuji  
PATENT ASSIGNEE(S): New Japan Chemical Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.  
CODEN: JKOXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 6400121	A2	19890105	JP 1988-31591	19880213
PRIORITY APPLN. INFO.:			JP 1987-32030	A1 19870213

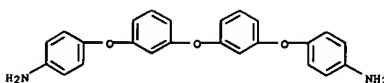
IT 118570-32-4P  
RL: IMP (Industrial manufacture); PREP (Preparation)  
(manufacture of, soluble, heat-resistant)  
RN 118570-32-4 CAPIUS  
CN 1,3-isobenzofurandione, 5,5'-sulfonylbis-, polymer with 4,4'-[oxybis(3,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1  
CRN 61041-13-2  
CMP C24 H20 N2 O3

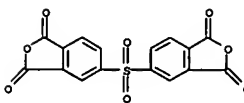
PAGE 1-A

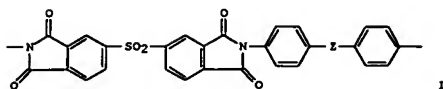


PAGE 2-A



CM 2  
CRN 2540-99-0  
CMP C16 H6 O8 S





AB Title polyimides containing repeating units I (Z = SC6H4S, X1C6H4YC6H4X2; X1-2 = O, S; Y = direct bond, O, S, SO2, CO) are prepared by treating di-Ph sulfone-3,3',4,4'-tetracarboxylic acid deriva. with Z(C6H4NH2-4)2. Thus, a solution of 4,4'-bis(p-aminophenoxy)diphenyl sulfone in N-methyl-2-pyrrolidone was treated with di-Ph sulfone-3,3',4,4'-tetracarboxylic dianhydride at 25-30° for 1 h and the mixture was heated at 160° for 5 h to give a polyimide with intrinsic viscosity 0.79 dL/g, 10%-weight-loss temperature 365°, softening point 285°, tensile strength 12.2 kg/mm<sup>2</sup>, and modulus 271 kg/mm<sup>2</sup>.

ACCESSION NUMBER: 1989:58329 CAPLUS

DOCUMENT NUMBER: 110:58329

TITLE: Solvent-soluble aromatic polyimides and their manufacture

INVENTOR(S): Ikeda, Tsuyoshi; Mami, Hiroshi; Nakazawa, Mikiro; Kawashima, Yuji

PATENT ASSIGNEE(S): New Japan Chemical Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKOXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63189239	A2	19880817	JP 1987-32029	19870213
JP 05062893	B4	19930909		

PRIORITY APPL. INFO.: JP 1987-32029 19870213

IT 118570-32-4P

RL: PREP (Preparation)  
(preparation of, solvent-soluble)

RN 118570-32-4 CAPLUS

CN 1,3-Isobenzofurandione, 5,5'-sulfonylbis-, polymer with 4,4'-[oxybis(3,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CH 1

CRN 61041-13-2

CMF C24 H20 N2 O3

L26 ANSWER 33 OF 39 CAPLUS COPYRIGHT 2005 ACS on STN

AB The title lubricants, useful for magnetic disks, contain RfR1(R2)m(OC6H4)nOP (Rf = F-containing alkyl, polyoxyalkyl; R1 = CH2, or

CO:

R2 = C2-3 oxyalkylene; m ≥ 0; n = 0-5) as main components. Thus, 50 g Krytox 157FS(L) was dispersed in a mixture of trichlorotrifluoroethane

and

Me2O, then stirred with 1N LiAlH4 Me2O solution to give 25 g F[CF(CF3)CF2O]nCF(CF3)CH2OH (average n = 14), which was treated with

0.03 mol

equivalent PhBr in trifluorotrichloroethane in the presence of NaH at 20-50° for 6 h to give F[CF(CF3)CF2O]nCF(CF3)CH2OPh (average n = 14; 1). Thus, a phenolic epoxy resin magnetic film was coated with I and

heat

set to give a sample. The coating of the sample did not break in 53,000 revolutions at 10 g load, 10 m/s, and 25°, vs. 23,000 revolutions for Al plate magnetic coating coated with Krytox 143 AC (lubricant).

ACCESSION NUMBER: 1988:63390 CAPLUS

DOCUMENT NUMBER: 109:23390

TITLE: Lubricants for plastics

INVENTOR(S): Shoji, Saburo; Ito, Yutaka; Nakano, Fumio; Narahara, Toshikazu

PATENT ASSIGNEE(S): Hitachi, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKOXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63150384	A2	19880623	JP 1986-296545	19861215
			JP 1986-296545	19861215

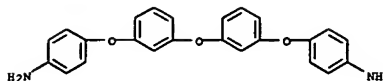
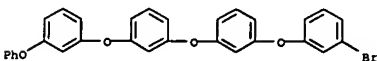
PRIORITY APPL. INFO.:

IT 117829-68-2

RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with fluorine-containing polyethers)

RN 117829-68-2 CAPLUS

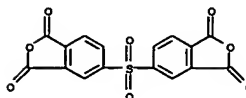
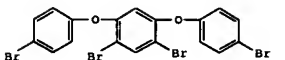
CN Benzene, 1-[3-(3-bromophenoxy)phenoxy]-3-(3-phenoxyphenoxy)- (9CI) (CA INDEX NAME)



CH 2

CRN 2540-99-0

CMF C16 H6 O8 S

L26 ANSWER 34 OF 39 CAPLUS COPYRIGHT 2005 ACS on STN  
GI

AB Electrophilic bromide was used for the site-specific bromination of 3-PhO[C6H3O]nPh (n = 1,5). Compared to the Ph ether stationary phases

used

in gas chromatog., bromination primarily raises the lower and upper operating temps., generally leads to a reduction in the efficiency of column

packings and changes the selectivity and polarity of the phases only to a small extent. I has the most useful stationary phase properties for the separation of organic compds. with a useable temperature range of

80-200°.

ACCESSION NUMBER: 1984:67923 CAPLUS

DOCUMENT NUMBER: 100:67923

TITLE: Synthesis and stationary phase properties of bromophenyl ethers

AUTHOR(S): Dhanesar, Subhash C.; Poole, Colin F.

CORPORATE SOURCE: Dep. Chem., Wayne State Univ., Detroit, MI, 48202, USA

SOURCE: Journal of Chromatography (1983), 267(2), 293-301

CODEN: JOCRAM; ISSN: 0021-9673

DOCUMENT TYPE: Journal

LANGUAGE: English

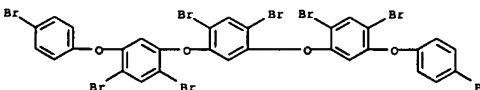
IT 85034-04-4 85034-05-5

RL: RCT (Reactant); RACT (Reactant or reagent)  
(gas chromatog. stationary phase properties of)

RN 85034-04-4 CAPLUS

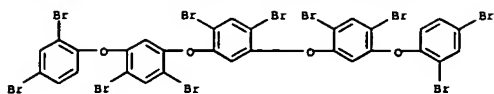
CN Benzene, 1,5-dibromo-2,4-bis[2,4-dibromo-5-(4-bromophenoxy)phenoxy]- (9CI)

(CA INDEX NAME)



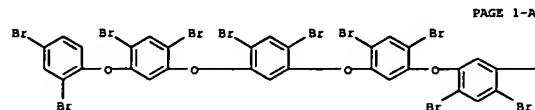
RN 85034-05-5 CAPLUS

CN Benzene, 1,5-dibromo-2,4-bis[2,4-dibromo-5-(2,4-dibromophenoxy)phenoxy]- (9CI) (CA INDEX NAME)

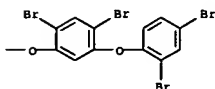


IT 88708-82-1P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation and gas chromatog. stationary phase properties of)  
 RN 88708-82-1 CAPIUS  
 CN Benzene, 1,3-dibromo-4,6-bis[2,4-dibromo-5-(2,4-dibromophenoxy)phenoxy]phenoxy]- (9CI) (CA INDEX NAME)



PAGE 1-A



PAGE 1-B

L26 ANSWER 36 OF 39 CAPIUS COPYRIGHT 2005 ACS on STN

AB Investigation of structure and optical properties of 8 poly(amide acids) and the corresponding polyimides (p-phenylenediamine-pyromellitic dianhydride copolymer [25038-82-8], etc.) indicated that the crystalline structure of polyimides, formed at elevated temps., was preceded by sufficiently perfected, on the optical level, structure of the corresponding poly(amide acids) that were amorphous according to x-ray diffraction data. Components of the polarizability tensors of monomeric units in poly(amide acids) and polyimides were calculated, and the suitability of conoscopic detns. was demonstrated for following the imidization of poly(amide acids), crystallization of polyimides, and determination of the position of the macromol. axis (relative to the film surface) in phase transitions.

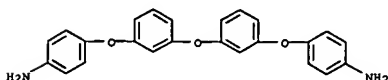
ACCESSION NUMBER: 1976:578153 CAPIUS  
 DOCUMENT NUMBER: 85:178153  
 TITLE: Morphology and optical properties of polyimides and poly(ester imides)  
 AUTHOR(S): Kenarov, A. V.; Sidorovich, A. V.  
 CORPORATE SOURCE: Inst. Vysokomol. Soedin., Leningrad, USSR  
 SOURCE: Vysokomolekulyarnye Soedineniya, Seriya A (1976), 18(9), 1945-50  
 CODEN: VYSAAF; ISSN: 0507-5475  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 IT 61041-14-3 61041-16-5

RL: PRP (Properties)  
 (morphol. and optical properties of)

RN 61041-14-3 CAPIUS  
 CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 4,4'-[oxybis(3,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1

CRN 61041-13-2  
 CMF C24 H20 N2 O3



CM 2

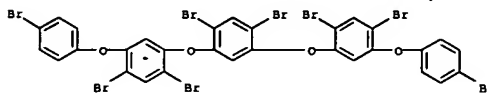
CRN 2770-49-2  
 CMF C24 H10 O10

L26 ANSWER 35 OF 39 CAPIUS COPYRIGHT 2005 ACS on STN

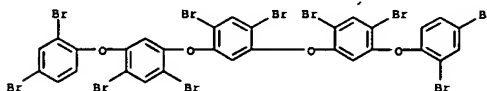
AB A general route for preparation of cyanophenyl ethers for polar thermally stable liquid phases in gas chromatog. is described. Electrophilic bromination of polyphenyl ethers with  $\text{Ti}(\text{OAc})_3$  catalysis occurred exclusively para to the ether bond. Under vigorous reaction conditions the terminal Ph rings may be O-brominated. On subsequent reaction with  $\text{CuCN}$  all p-Br groups may be exchanged but o-Br groups are resistant to reaction.

ACCESSION NUMBER: 1983:125514 CAPIUS  
 DOCUMENT NUMBER: 98:125514  
 TITLE: Synthesis and chromatographic properties of cyanophenyl ethers  
 AUTHOR(S): Dhanesar, S. C.; Poole, C. F.  
 CORPORATE SOURCE: Dep. Chem., Wayne State Univ., Detroit, MI, 48202, USA  
 SOURCE: Journal of Chromatography (1982), 252, 91-9  
 CODEN: JOCRAM; ISSN: 0021-9673

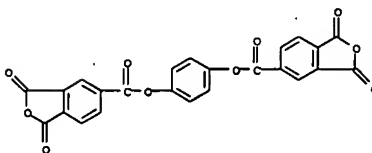
DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 85034-04-4P 85034-05-5P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of, by thallium-catalyzed bromination of di-Ph ether)  
 RN 85034-04-4 CAPIUS  
 CN Benzene, 1,5-dibromo-2,4-bis[2,4-dibromo-5-(4-bromophenoxy)phenoxy]- (9CI) (CA INDEX NAME)



RN 85034-05-5 CAPIUS  
 CN Benzene, 1,5-dibromo-2,4-bis[2,4-dibromo-5-(2,4-dibromophenoxy)phenoxy]- (9CI) (CA INDEX NAME)



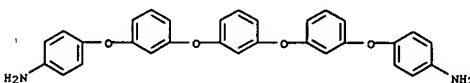
L26 ANSWER 36 OF 39 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)



RN 61041-16-5 CAPIUS  
 CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 4,4'-[1,3-phenylenebis(oxy-3,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

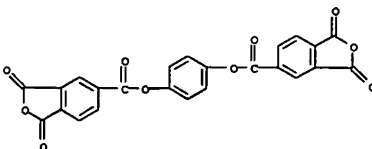
CM 1

CRN 61041-15-4  
 CMF C30 H24 N2 O4



CM 2

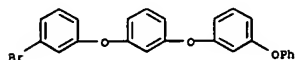
CRN 2770-49-2  
 CMF C24 H10 O10



L26 ANSWER 37 OF 39 CAPIUS COPYRIGHT 2005 ACS on STN  
 GI For diagram(s), see printed CA Issue.  
 AB The title compds. (I, n = 1-5) which are useful in high temperature lubricants, are prepared by heating 2 moles PhOH or of 3-(3-RC6H4O)C6H4OH, (R = H or PhO) with 1 mole m-C6H4Br2 or with 2 moles 3-(3-RC6H4O)C6H4Br (R = H, PhO, or 3-PhOC6H4O) in the presence of 86% aqueous KOH and Cu powder.  
 ACCESSION NUMBER: 1971:405482 CAPIUS  
 DOCUMENT NUMBER: 75:5482  
 TITLE: Poly(phenyl ethers)  
 INVENTOR(S): Brown, Gordon P.  
 PATENT ASSIGNEE(S): General Electric Co.  
 SOURCE: U.S., 4 pp.  
 CODEN: USYXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3567783	A	19710302	US 1960-51500	19600824
PRIORITY APPLN. INFO.: US 1960-51500 A 19600824				

IT 32220-73-8P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 32220-73-8 CAPIUS  
 CN Benzene, 1-(m-bromophenoxy)-3-(m-phenoxyphenoxy)- (8CI) (CA INDEX NAME)

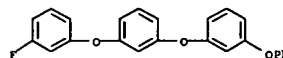


L26 ANSWER 38 OF 39 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB A number of perfluorinated and partially fluorinated phenyl and polyphenyl ethers were synthesized, characterized for thermal stability, fire resistance, and viscosity, and compared with their H analogs to assess the potential use of this class of compds. as functional fluids. Without exception, polyfluorination and perfluorination lower thermal stability; the decrease in stability depends on the position and number of fluorine substituents. The autoignition temperature and fire resistance are not improved over the H analog, and viscosity is degraded. These data coupled with the comparatively high melting points do not suggest a bright future for this class of compds. as useful functional fluids. 6 references.

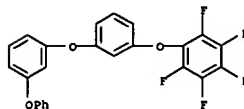
ACCESSION NUMBER: 1968:77890 CAPIUS  
 DOCUMENT NUMBER: 68:77890  
 TITLE: Synthesis, thermal stability, flammability, and viscosity of some partially fluorinated and perfluorinated aromatic and polyaromatic ethers  
 AUTHOR(S): Richardson, George Albert; Blake, Edward S.  
 CORPORATE SOURCE: Monsanto Res. Corp., Dayton, OH, USA  
 SOURCE: Industrial & Engineering Chemistry Product Research and Development (1968), 7(1), 17-21  
 CODEN: IEPRA6; ISSN: 0196-4321

DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 5026-82-4P 17742-29-9P 17742-30-2P  
 17742-32-4P 17742-37-9P 17742-42-6P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)

RN 5026-82-4 CAPIUS  
 CN Benzene, 1-(m-fluorophenoxy)-3-(m-phenoxyphenoxy)- (7CI, 8CI) (CA INDEX NAME)

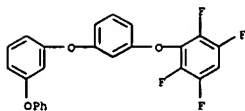


RN 17742-29-9 CAPIUS  
 CN Benzene, 1-(pentafluorophenoxy)-3-(m-phenoxyphenoxy)- (8CI) (CA INDEX NAME)

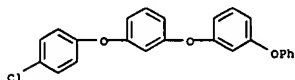


RN 17742-30-2 CAPIUS  
 CN Benzene, 1-(m-phenoxyphenoxy)-3-(2,3,4,5-tetrafluorophenoxy)- (8CI) (CA INDEX NAME)

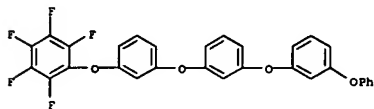
L26 ANSWER 38 OF 39 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)



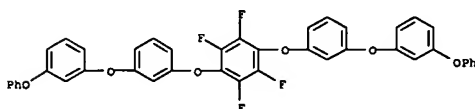
RN 17742-32-4 CAPIUS  
 CN Benzene, 1-(p-chlorophenoxy)-3-(m-phenoxyphenoxy)- (8CI) (CA INDEX NAME)



RN 17742-37-9 CAPIUS  
 CN Benzene, 1-[m-(pentafluorophenoxy)phenoxy]-3-(m-phenoxyphenoxy)- (8CI) (CA INDEX NAME)



RN 17742-42-6 CAPIUS  
 CN Benzene, 1,2,4,5-tetrafluoro-3,6-bis[m-(m-phenoxyphenoxy)phenoxy]- (8CI) (CA INDEX NAME)



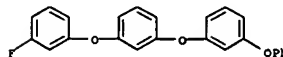
L26 ANSWER 39 OF 39 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB Polyphenyl ethers containing 4-7 Ph groups and in which one of the terminal groups is substituted by 1, 2, or 5 F atoms and by 2 m-phenoxyphenyl groups are heat-stable compds. with low m.p.s. The mono-F compds. were prepared by condensation of an alkali phenoxide with bromofluorobenzene in the presence of Cu. The penta-F compds. were prepared by condensation of an alkali phenoxide with hexafluorobenzene. 1,3,4-Trifluorotris(m-phenoxyphenoxy)benzene was prepared by condensation of 3 equivalent of K m-phenoxyphenoxide with hexafluorobenzene. Thus, 58.4 g. m-(m-phenoxyphenoxy)phenol was mixed with 12.4 g. KOH and 35 ml. PhMe; water was removed with the PhMe by azeotropic distillation. The dry phenoxide was dissolved in 100 ml. diglyme and added to a solution of 35 g. m-bromofluorobenzene in 100 ml. diglyme containing 0.5 g. Cu powder, over a period of 2.25 hrs. at 155°. The mixture was then stirred for 25.5 hrs. at 165° cooled, and filtered. The diglyme was distilled and the residue dissolved in ether. The ether solution was washed with acid, dilute alkali, and water, and distillation gave 44.5 g. (59.5% theory) of pure m-(m-fluorophenoxy)phenyl m-phenoxyphenyl ether, decomposition 462° b0.15 212°, n25D 1.6094.

ACCESSION NUMBER: 1965:487872 CAPIUS  
 DOCUMENT NUMBER: 63:87872  
 ORIGINAL REFERENCE NO.: 63:16116f-g  
 TITLE: Heat-stable hydraulic fluids  
 PATENT ASSIGNEE(S): Monsanto Co.  
 SOURCE: 18 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NL 6414074		19650608	NL	
PRIORITY APPLN. INFO.: US 19631204				

IT 5026-82-4, Benzene, 1-(m-fluorophenoxy)-3-(m-phenoxyphenoxy)- (as hydraulic fluid)

RN 5026-82-4 CAPIUS  
 CN Benzene, 1-(m-fluorophenoxy)-3-(m-phenoxyphenoxy)- (7CI, 8CI) (CA INDEX NAME)



TOTAL

## ENTRY

## SESSION

FULL ESTIMATED COST

200-76

1198.80

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

## SESSION

CA SUBSCRIBER PRICE

-28.47

-30.66

FILE 'REGISTRY' ENTERED AT 19:41:56 ON 12 JAN 2005

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2005 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 10 JAN 2005 HIGHEST RN 811411-12-8

DICTIONARY FILE UPDATES: 10 JAN 2005 HIGHEST RN 811411-12-8

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

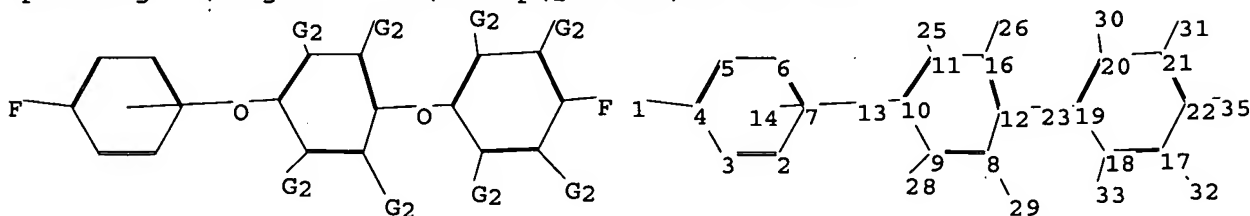
Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:

<http://www.cas.org/ONLINE/DBSS/registryss.html>

 $\Rightarrow$ 

Uploading C:\Program Files\Stnexp\Queries\10718532.str



```
chain nodes :
```

1 13 23 25 26 28 29 30 31 32 33 35

```

ring nodes :

```

2 3 4 5 6 7 8 9 10 11 12 16 17 18 19 20 21 22

chain bonds :

1-4 8-29 9-28 10-13 11-25 12-23 16-26 17-32 18-33 19-23 20-30 21-31  
22-35

ring bonds :

2-3	2-7	3-4	4-5	5-6	6-7	8-9	8-12	9-10	10-11	11-16	12-16	17-18	17-22
18-19	19-20	20-21	21-22										

exact/norm bonds :

8-29 9-28 10-13 11-25 12-23 16-26 17-32 18-33 19-23 20-30 21-31

exact bonds :

1-4 22-35

normalized bonds :

2-3 2-7 3-4 4-5 5-6 6-7 8-9 8-12 9-10 10-11 11-16 12-16 17-18 17-22  
18-19 19-20 20-21 21-22

G1:N,X

G2:X,Ak,H

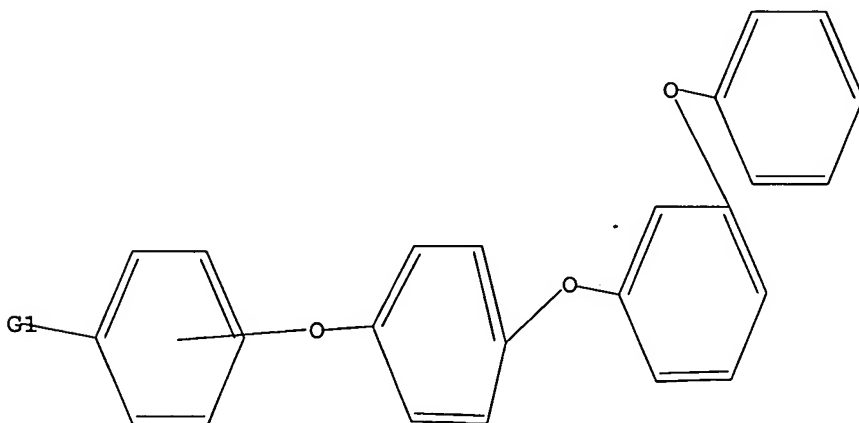
Match level :

1:CLASS 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom  
11:Atom 12:Atom 13:CLASS 14:CLASS 16:CLASS 17:Atom 18:Atom 19:Atom 20:Atom  
21:Atom 22:Atom 23:CLASS 25:CLASS 26:CLASS 28:CLASS 29:CLASS 30:CLASS  
31:CLASS 32:CLASS 33:CLASS 35:CLASS

L27 STRUCTURE UPLOADED

=> d query

L27 STR



G1 N,X

Structure attributes must be viewed using STN Express query preparation.

=> s l27

SAMPLE SEARCH INITIATED 19:42:54 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 1690 TO ITERATE

59.2% PROCESSED 1000 ITERATIONS  
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 31334 TO 36266  
PROJECTED ANSWERS: 0 TO 0

L28 0 SEA SSS SAM L27



=> s l27 full  
FULL SEARCH INITIATED 19:42:58 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 33622 TO ITERATE

100.0% PROCESSED 33622 ITERATIONS 31 ANSWERS  
SEARCH TIME: 00.00.01

L29 31 SEA SSS FUL L27

=> fil caplus		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	161.76	1360.56
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-30.66

FILE 'CAPLUS' ENTERED AT 19:43:02 ON 12 JAN 2005  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

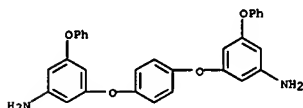
FILE COVERS 1907 - 12 Jan 2005 VOL 142 ISS 3  
FILE LAST UPDATED: 11 Jan 2005 (20050111/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l29  
L30 14 L29

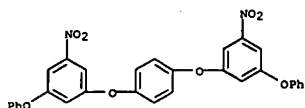
=> d l30 1-14 abs ibib hitstr

L30 ANSWER 1 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB The dependence of the glass transition and initial decomposition temps.  
 of  
 poly(pyrroleneimide and polynaphthylimide on the conformational rigidity  
 was  
 studied by the Monte Carlo, Kuhn segment, and quantum chemical AM1  
 methods.  
 The corresponding linear plots can be used for estimation of the glass  
 transition and initial decomposition temps. when exptl. determination is  
 difficult.  
 ACCESSION NUMBER: 2002:479425 CAPLUS  
 DOCUMENT NUMBER: 137:295427  
 TITLE: Effect of conformational rigidity on the glass  
 transition and initial decomposition temperatures of  
 polyimides  
 AUTHOR(S): Ronova, I. A.; Eylshina, L. B.; Vasilyuk, A. N.;  
 Rusanov, A. L.; Bulycheva, E. G.  
 CORPORATE SOURCE: A. N. Nesmeyanov Institute of Organoelement  
 Compounds,  
 SOURCE: Russian Academy of Sciences, Moscow, 119991, Russia  
 Russian Chemical Bulletin (Translation of Izvestiya  
 Akademii Nauk, Seriya Khimicheskaya) (2002), 51(5),  
 820-824  
 CODEN: RCBUEY; ISSN: 1066-5285  
 PUBLISHER: Kluwer Academic/Consultants Bureau  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 272115-85-2  
 RL: PRP (Properties)  
 (effect of conformational rigidity on glass transition and initial  
 decomposition temps. of polyimides)  
 RN 272115-85-2 CAPLUS  
 CN [2]Benzopyrano[6,5,4-def][2]benzopyran-1,3,6,8-tetrone, polymer with  
 3,3'-[1,4-phenylenebis(oxy)]bis[5-phenoxybenzenamine] (9CI) (CA INDEX  
 NAME)  
 CM 1  
 CRN 179264-07-4  
 CMF C30 H24 N2 O4



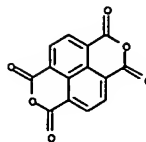
CM 2  
 CRN 81-30-1  
 CMF C14 H4 O6

L30 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB Poly(naphthalenecarboximides) and poly(perylenecarboximides) with a  
 reduced viscosity of 0.20-0.89 dL/g were synthesized by the interaction  
 of  
 phenoxy-substituted diamines-deriva. of 2,4,6-trinitrotoluene with a  
 number  
 of bis(phthalic anhydrides) by high-temperature polycondensation in  
 phenolic  
 solvents. The resulting polymers are characterized by an improved  
 solubility  
 in organic solvents, their glass transition temps. lie in the  
 250-315°C range, and the temps. corresponding to the onset of  
 intense degradation are in the 475-500°C.  
 ACCESSION NUMBER: 2001:524127 CAPLUS  
 DOCUMENT NUMBER: 135:242603  
 TITLE: Soluble poly(naphthalenecarboximides) and  
 poly(perylenecarboximides) based on  
 phenoxy-substituted diamines  
 Rusanov, A. L.; Bulycheva, E. G.; Elshina, L. B.;  
 Shevelev, S. A.; Dutov, M. D.; Vatsadze, I. A.  
 CORPORATE SOURCE: Inst. Elementoorg. Soedinenii im. A. N. Nesmeyanova,  
 Ross. Akad. Nauk, Moscow, 117813, Russia  
 SOURCE: Vysokomolekulyarnye Soedineniya, Seriya A i Seriya B  
 (2000), 42(12), 2082-2088  
 CODEN: VSSBEE; ISSN: 1023-3091  
 PUBLISHER: MAIK Nauka/Interperiodica Publishing  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 IT 168839-63-2P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (intermediate in monomer preparation; preparation and properties of  
 soluble  
 poly(naphthalenecarboximides) and poly(perylenecarboximides) based on  
 phenoxy-substituted diamines)  
 RN 168839-63-2 CAPLUS  
 CN Benzene, 1,4-bis(3-nitro-5-phenoxyphenoxy)- (9CI) (CA INDEX NAME)



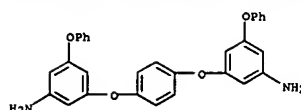
IT 179264-07-4P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (monomer; preparation and properties of soluble  
 poly(naphthalenecarboximides)  
 and poly(perylenecarboximides) based on phenoxy-substituted diamines)  
 RN 179264-07-4 CAPLUS  
 CN Benzenamine, 3,3'-[1,4-phenylenebis(oxy)]bis[5-phenoxy- (9CI) (CA INDEX  
 NAME)

L30 ANSWER 1 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

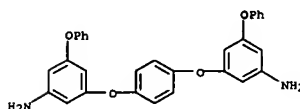


REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR  
 THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE  
 FORMAT

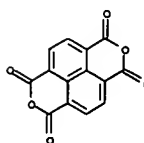
L30 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



IT 272115-85-2P 272115-87-4P 360079-10-1P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (preparation and properties of soluble poly(naphthalenecarboximides)  
 and  
 poly(perylenecarboximides) based on phenoxy-substituted diamines)  
 RN 272115-85-2 CAPLUS  
 CN [2]Benzopyrano[6,5,4-def][2]benzopyran-1,3,6,8-tetrone, polymer with  
 3,3'-[1,4-phenylenebis(oxy)]bis[5-phenoxybenzenamine] (9CI) (CA INDEX  
 NAME)  
 CM 1  
 CRN 179264-07-4  
 CMF C30 H24 N2 O4

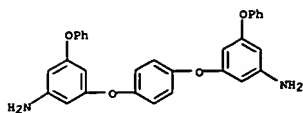


CM 2  
 CRN 81-30-1  
 CMF C14 H4 O6

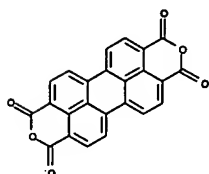


RN 272115-87-4 CAPLUS  
 CN Perylo[3,4-cd:9,10-c'd']dipyran-1,3,8,10-tetrone, polymer with  
 3,3'-[1,4-phenylenebis(oxy)]bis[5-phenoxybenzenamine] (9CI) (CA INDEX  
 NAME)

CM 1

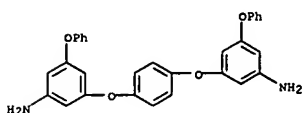
CRN 179264-07-4  
CMF C30 H24 N2 O4

CM 2

CRN 128-69-8  
CMF C24 H8 O6

RN 360079-18-1 CAPIUS  
CM 1H,3H-Naphtho[1,8-cd]pyran-1,3-dione, 6,6'-(1,3-phenylenedicarbonyl)bis-, polymer with 3,3'-[1,4-phenylenebis(oxy)]bis[5-phenoxybenzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 179264-07-4  
CMF C30 H24 N2 O4

AB New condensation monomers-primarily diamines containing phenoxy, thiophenoxy and phenylsulfone substituents were obtained from 2,4,6-trinitrotoluene (TNT). Interaction of some dinitro compds. containing strong electron-withdrawing groups in meta-positions with bis-phenols under conditions of aromatic nucleophilic polynitro substitution reactions led to the formation of aromatic oligoethers. Based on aromatic diamines containing phenoxy and thiophenoxy substituents under conditions of traditional polycondensation and cyclo-condensation reactions, aromatic polyamides and polyimides demonstrating improved processability combined with high thermal stability were obtained.

ACCESSION NUMBER: 2000:248747 CAPIUS

DOCUMENT NUMBER: 133:17907

TITLE: New condensation aromatic polymers containing

phenoxy,

AUTHOR(S):

thiophenoxy, and phenylsulfone side groups  
Rusanov, A. L.; Tartakovskiy, V. A.; Shevelev, S. A.;  
Dutov, M. D.; Vatsadse, I. A.; Serushkina, O. V.;  
Komarova, L. G.; Prigozhina, M. P.; Bulicheva, E. G.;  
Elshina, L. B.

CORPORATE SOURCE: A.N. Nesmeyanov Institute of Organo-Element

Compounds,

SOURCE: Russian Academy of Sciences, Moscow, 117813, Russia

Polymer (2000), 41(13), 5021-5037

CODEN: POLMAG; ISSN: 0032-3861

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

IT 179264-32-5P 179264-34-7P 179264-36-9P

179264-38-1P 179264-40-5P 179264-42-7P

272115-85-2P 272115-87-4P 272115-90-9P

RL: PRP (Properties); SYN (Synthetic preparation); PREP (Preparation)

(condensation aromatic polymers containing phenoxy, thiophenoxy, and

phenylsulfone side groups)

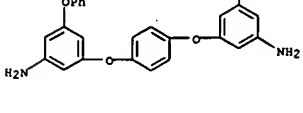
RN 179264-32-5 CAPIUS

CM 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with

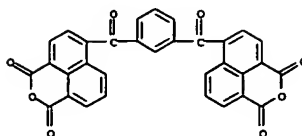
3,3'-[1,4-phenylenebis(oxy)]bis[5-phenoxybenzenamine] (9CI) (CA INDEX

NAME)

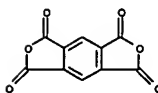
CM 1

CRN 179264-07-4  
CMF C30 H24 N2 O4

CM 2

CRN 107503-27-5  
CMF C32 H14 O8

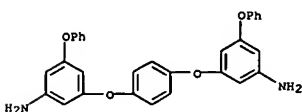
CM 2

CRN 89-32-7  
CMF C10 H2 O6

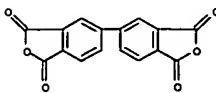
RN 179264-34-7 CAPIUS

CM [5,5'-Bisobenzofuran]-1,1',3,3'-tetrone, polymer with 3,3'-[1,4-phenylenebis(oxy)]bis[5-phenoxybenzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 179264-07-4  
CMF C30 H24 N2 O4

CM 2

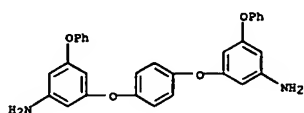
CRN 2420-87-3  
CMF C16 H6 O6

RN 179264-36-9 CAPIUS

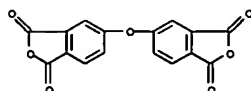
CM 1,3-Isobenzofurandione, 5,5'-oxybis-, polymer with 3,3'-[1,4-phenylenebis(oxy)]bis[5-phenoxybenzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 179264-07-4  
CMF C30 H24 N2 O4

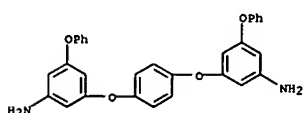


CM 2  
CRN 1823-59-2  
CMF C16 H6 O7

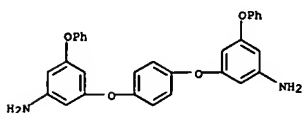


RN 179264-38-1 CAPLUS  
CN 1,3-isobenzofurandione, 5,5'-carbonylbis-, polymer with 3,3'-[1,4-phenylenebis(oxy)]bis[5-phenoxybenzenamine] (9CI) (CA INDEX NAME)

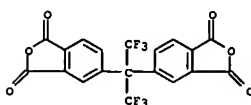
CM 1  
CRN 179264-07-4  
CMF C30 H24 N2 O4



CM 2  
CRN 2421-28-5  
CMF C17 H6 O7

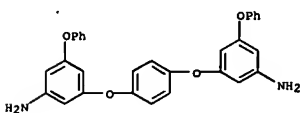


CM 2  
CRN 1107-00-2  
CMF C19 H6 F6 O6

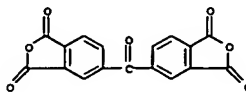


RN 272115-85-2 CAPLUS  
CN [2]Benzopyrano[6,5,4-def][2]benzopyran-1,3,6,8-tetrone, polymer with 3,3'-[1,4-phenylenebis(oxy)]bis[5-phenoxybenzenamine] (9CI) (CA INDEX NAME)

CM 1  
CRN 179264-07-4  
CMF C30 H24 N2 O4

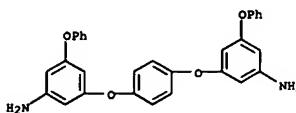


CM 2  
CRN 81-30-1  
CMF C14 H4 O6

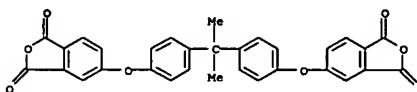


RN 179264-40-5 CAPLUS  
CN 1,3-isobenzofurandione, 5,5'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bis-, polymer with 3,3'-[1,4-phenylenebis(oxy)]bis[5-phenoxybenzenamine] (9CI) (CA INDEX NAME)

CM 1  
CRN 179264-07-4  
CMF C30 H24 N2 O4

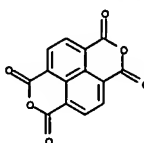


CM 2  
CRN 38103-06-9  
CMF C31 H20 O8



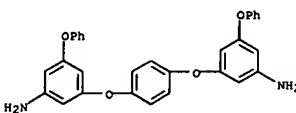
RN 179264-42-7 CAPLUS  
CN 1,3-isobenzofurandione, 5,5'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis-, polymer with 3,3'-[1,4-phenylenebis(oxy)]bis[5-phenoxybenzenamine] (9CI) (CA INDEX NAME)

CM 1  
CRN 179264-07-4  
CMF C30 H24 N2 O4

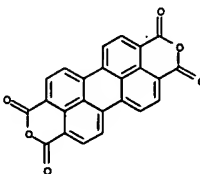


RN 272115-87-4 CAPLUS  
CN Perylo[3,4-cd:9,10-c'd']dipyran-1,3,8,10-tetrone, polymer with 3,3'-[1,4-phenylenebis(oxy)]bis[5-phenoxybenzenamine] (9CI) (CA INDEX NAME)

CM 1  
CRN 179264-07-4  
CMF C30 H24 N2 O4

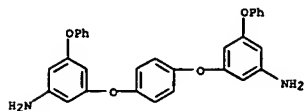


CM 2  
CRN 128-69-8  
CMF C24 H8 O6

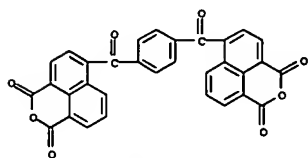


RN 272115-90-9 CAPLUS  
CN 1H,3H-Naphtho[1,8-cd]pyran-1,3-dione, 6,6'-(1,4-phenylenedicarbonyl)bis-, polymer with 3,3'-[1,4-phenylenebis(oxy)]bis[5-phenoxybenzenamine] (9CI) (CA INDEX NAME)

CM 1

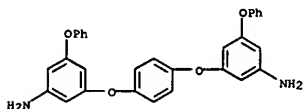
CRN 179264-07-4  
CMF C30 H24 N2 O4

CM 2

CRN 107503-31-1  
CMF C32 H14 O8

IT 179264-07-4P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(monomer: condensation aromatic polymers containing phenoxy,  
thiophenoxy, and  
phenylsulfone side groups)  
RN 179264-07-4 CAPLUS  
CN Benzenamine, 3,3'-[1,4-phenylenebis(oxy)]bis[5-phenoxy- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS

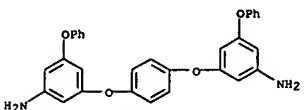
AB New aromatic diamines containing phenoxy substituents - derivs. of 2,4,6-trinitrotoluene - were synthesized. The reaction of these diamines with aromatic tetracarboxylic dianhydrides yielded phenoxy-substituted polyimides. The effect of the structure of the synthesized polymers on their major characteristics was studied. It was found that all polyimides, especially polyimides based on dianhydrides containing "dangling" groups, show large differences between the glass transition and degradation temps., whereas high thermal stability of these polymers remains unchanged. The majority of the obtained polymers are well soluble in organic solvents.

ACCESSION NUMBER: 1998:6753 CAPLUS  
DOCUMENT NUMBER: 128:89167  
TITLE: New phenoxy-substituted aromatic diamines and related polyimides  
AUTHOR(S): Rusanov, A. L.; Komarova, L. G.; Prigozhina, M. P.; Sheveleva, T. S.; Es'kov, A. A.; Shevelev, S. A.; Dutov, M. D.; Vatsadze, I. A.  
CORPORATE SOURCE: Nemesyanov Inst. Organoelement Compds., Russ. Acad. Sci., Moscow, 117813, Russia  
SOURCE: Vysokomolekulyarnye Soedineniya, Seriya A i Seriya B (1997), 39(10), 1701-1705  
CODEN: VSSBEE; ISSN: 1023-3091  
PUBLISHER: MAIK Nauka  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian

IT 179264-07-4P

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(monomer: phenoxy-substituted aromatic diamines and related polyimides)

RN 179264-07-4 CAPLUS  
CN Benzenamine, 3,3'-[1,4-phenylenebis(oxy)]bis[5-phenoxy- (9CI) (CA INDEX NAME)



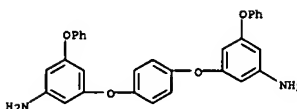
IT 179264-32-5P 179264-34-7P 179264-36-9P

179264-38-1P 179264-40-5P 179264-42-7P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(polyimide preparation from phenoxy-substituted aromatic diamines)  
RN 179264-32-5 CAPLUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 3,3'-[1,4-phenylenebis(oxy)]bis[5-phenoxybenzenamine] (9CI) (CA INDEX NAME)

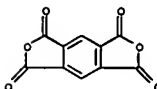
CM 1

FORMAT

CRN 179264-07-4  
CMF C30 H24 N2 O4



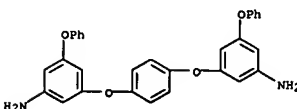
CM 2

CRN 89-32-7  
CMF C10 H2 O6

RN 179264-34-7 CAPLUS

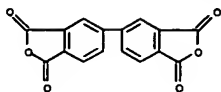
CN [5,5'-Biisobenzofuran]-1,1',3,3'-tetrone, polymer with 3,3'-[1,4-phenylenebis(oxy)]bis[5-phenoxybenzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 179264-07-4  
CMF C30 H24 N2 O4

CM 2

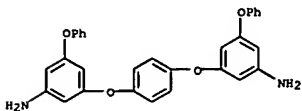
CRN 2420-87-3  
CMF C16 H6 O6



RN 179264-36-9 CAPLUS  
CN 1,3-Isobenzofurandione, 5,5'-oxybis-, polymer with 3,3'-(1,4-phenylenebis(oxy))bis[5-phenoxybenzenamine] (9CI) (CA INDEX NAME)

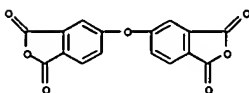
CM 1

CRN 179264-07-4  
CMF C30 H24 N2 O4



CM 2

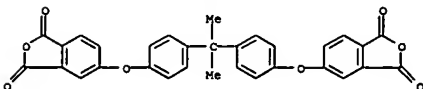
CRN 1823-59-2  
CMF C16 H6 O7



RN 179264-38-1 CAPLUS  
CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with 3,3'-(1,4-phenylenebis(oxy))bis[5-phenoxybenzenamine] (9CI) (CA INDEX NAME)

CM 1

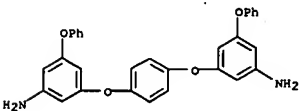
CRN 179264-07-4  
CMF C30 H24 N2 O4



RN 179264-42-7 CAPLUS  
CN 1,3-Isobenzofurandione, 5,5'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis-, polymer with 3,3'-(1,4-phenylenebis(oxy))bis[5-phenoxybenzenamine] (9CI) (CA INDEX NAME)

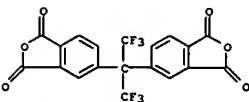
CM 1

CRN 179264-07-4  
CMF C30 H24 N2 O4

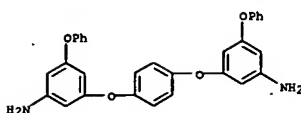


CM 2

CRN 1107-00-2  
CMF C19 H6 F6 O6

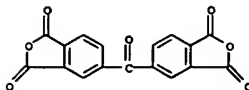


IT 168839-63-2P  
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(reactant in monomer preparation; phenoxy-substituted aromatic diamines and related polyimides)  
RN 168839-63-2 CAPLUS  
CN Benzene, 1,4-bis(3-nitro-5-phenoxyphenoxy)- (9CI) (CA INDEX NAME)



CM 2

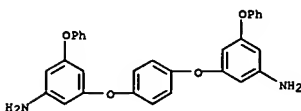
CRN 2421-28-5  
CMF C17 H6 O7



RN 179264-40-5 CAPLUS  
CN 1,3-Isobenzofurandione, 5,5'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bis-, polymer with 3,3'-(1,4-phenylenebis(oxy))bis[5-phenoxybenzenamine] (9CI) (CA INDEX NAME)

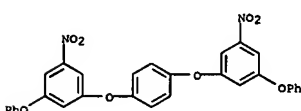
CM 1

CRN 179264-07-4  
CMF C30 H24 N2 O4



CM 2

CRN 38103-06-9  
CMF C31 H20 O8



L30 ANSWER 5 OF 14 CAPIUS COPYRIGHT 2005 ACS on STN

AB Title only translated.

ACCESSION NUMBER: 125:48636 CAPIUS

DOCUMENT NUMBER:

TITLE: Bis-(3-amino-5-phenoxy)phenyl ether of hydroquinone and polyimides on its base for thermal resistant material

INVENTOR(S): Rusanov, Aleksandr L.; Komarova, Lyudmila G.; Prigozhina, Marina P.; Sheveleva, Tatyana S.; Solomatina, Aleksandra I.; Shevelev, Svyatoslav A.; Dutov, Mikhail D.; Vatsadze, Irina A.; Serushkina, Olga V.

PATENT ASSIGNEE(S): Institut Elementoorganicheskikh Soedinenij RAN, Russia; Institut Organicheskoy Khimii RAN

SOURCE: Russ. From: Izobreteniya 1997, (3), 154-155.

CODEN: RUOXE7

DOCUMENT TYPE: Patent

LANGUAGE: Russian

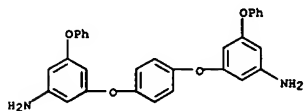
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RU 2072350	C1	19970127	RU 1994-28860	19940802
PRIORITY APPLN. INFO.:			RU 1994-28860	19940802

IT 179264-07-4DP, polyimides  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(bis(3-amino-5-phenoxy)phenyl ether of hydroquinone and polyimides on its base for thermal resistant material)

RN 179264-07-4 CAPIUS  
CN Benzenamine, 3,3'-(1,4-phenylenebis(oxy))bis(5-phenoxy- (9CI) (CA INDEX NAME)



L30 ANSWER 6 OF 14 CAPIUS COPYRIGHT 2005 ACS on STN

AB A large family of new aromatic diamines containing aryloxy side groups was

developed. All the diamines were obtained on the basis of 2,4,6-trinitrotoluene (TNT)--a very cheap and available explosive material. TNT was converted into 1,3,5-trinitrobenzene; subsequent aromatic nucleophilic nitro-displacement reactions led to mono- and diaryloxy-substituted mono- and dinitrobenzenes which were converted into the final aryloxy-substituted diamines. Interaction of the diamines obtained with aromatic dicarboxylic acids chlorides and aromatic tetracarboxylic acid dianhydrides led to the formation of new aryloxy-substituted polyamides and polyimides combining high thermal properties with solubility in organic solvents.

ACCESSION NUMBER: 1996:421512 CAPIUS

DOCUMENT NUMBER: 125:115337

TITLE: New aryloxy-substituted condensation polymers

AUTHOR(S): Rusanov, A. L.; Komarova, L. G.; Sheveleva, T. S.; Prigozhina, M. P.; Shevelev, S. A.; Dutov, M. D.; Vatsadze, I. A.; Serushkina, O. V.

CORPORATE SOURCE: A.N. Nesmeyanov Inst. Organoelement Compounds, Russian

SOURCE: Acad. Sci., Moscow, 117334, Russia

Reactive & Functional Polymers (1996), 30(1-3), 279-292

CODEN: RFPQF6; ISSN: 1381-5148

PUBLISHER: Elsevier

DOCUMENT TYPE: Journal

LANGUAGE: English

IT 179264-32-5P 179264-34-7P 179264-36-9P

179264-38-1P 179264-40-5P 179264-42-7P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(preparation and characterization of)

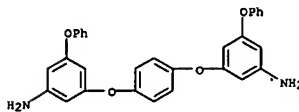
RN 179264-32-5 CAPIUS

CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 3,3'-(1,4-phenylenebis(oxy))bis(5-phenoxybenzenamine) (9CI) (CA INDEX NAME)

CH 1

CRN 179264-07-4

CMF C30 H24 N2 O4

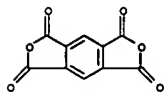


CH 2

CRN 89-32-7

L30 ANSWER 6 OF 14 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)

CMF C10 H2 O6

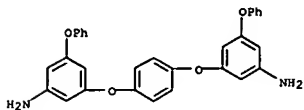


RN 179264-34-7 CAPIUS  
CN [5,5'-Bisobenzofuran]-1,1',3,3'-tetrone, polymer with 3,3'-(1,4-phenylenebis(oxy))bis(5-phenoxybenzenamine) (9CI) (CA INDEX NAME)

CH 1

CRN 179264-07-4

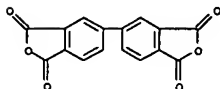
CMF C30 H24 N2 O4



CH 2

CRN 2420-87-3

CMF C16 H6 O6



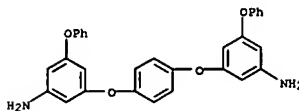
RN 179264-36-9 CAPIUS  
CN 1,3-Isobenzofurandione, 5,5'-oxybis-, polymer with 3,3'-(1,4-phenylenebis(oxy))bis(5-phenoxybenzenamine) (9CI) (CA INDEX NAME)

CH 1

CRN 179264-07-4

CMF C30 H24 N2 O4

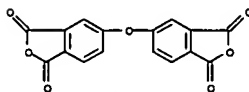
L30 ANSWER 6 OF 14 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)



CH 2

CRN 1823-59-2

CMF C16 H6 O7

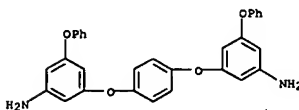


RN 179264-38-1 CAPIUS  
CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with 3,3'-(1,4-phenylenebis(oxy))bis(5-phenoxybenzenamine) (9CI) (CA INDEX NAME)

CH 1

CRN 179264-07-4

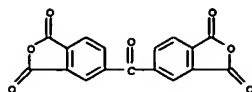
CMF C30 H24 N2 O4



CH 2

CRN 2421-28-5

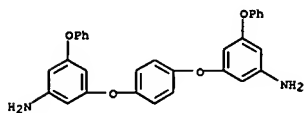
CMF C17 H6 O7



RN 179264-40-5 CAPLUS  
CN 1,3-isobenzofurandione, 5,5'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bis-, polymer with 3,3'-[1,4-phenylenebis(oxy)]bis[5-phenoxybenzenamine] (9CI) (CA INDEX NAME)

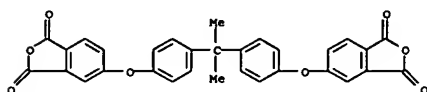
CM 1

CRN 179264-07-4  
CMF C30 H24 N2 O4



CM 2

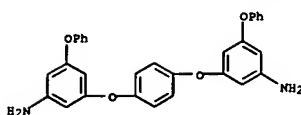
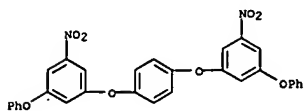
CRN 38103-06-9  
CMF C31 H20 O8



RN 179264-42-7 CAPLUS  
CN 1,3-isobenzofurandione, 5,5'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis-, polymer with 3,3'-[1,4-phenylenebis(oxy)]bis[5-phenoxybenzenamine] (9CI) (CA INDEX NAME)

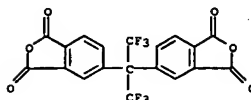
CM 1

CRN 179264-07-4  
CMF C30 H24 N2 O4

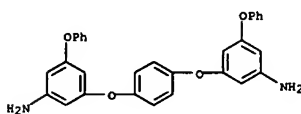


CM 2

CRN 1107-00-2  
CMF C19 H6 F6 O6



IT 179264-07-4P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and polycondensation of)  
RN 179264-07-4 CAPLUS  
CN Benzenamine, 3,3'-[1,4-phenylenebis(oxy)]bis[5-phenoxy- (9CI) (CA INDEX NAME)



IT 168839-63-2P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and reduction of)  
RN 168839-63-2 CAPLUS  
CN Benzene, 1,4-bis(3-nitro-5-phenoxyphenoxy)- (9CI) (CA INDEX NAME)

AB The dam-bars binding external terminals for the title lead frames are made of solvent-soluble fluoropolymers or polyimides. The use of the polymer dam-bar materials prevents damages on the external terminals during separation of the frames in the manufacturing

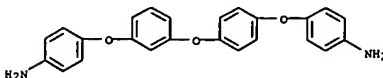
ACCESSION NUMBER: 1996:303782 CAPLUS  
DOCUMENT NUMBER: 124:330329  
TITLE: Semiconductor device lead frames having polymer dam-bars  
INVENTOR(S): Igarashi, Kazumasa  
PATENT ASSIGNEE(S): Nitto Denko Corp, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.  
CODEN: JKOXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08046126	A2	19960216	JP 1994-183731	19940804
PRIORITY APPL. INFO.:			JP 1994-183731	19940804

IT 121162-23-0  
RL: DEV (Device component use); POF (Polymer in formulation); PRP (Properties); USES (Uses)  
(polymer dam-bars for lead-frames in semiconductor devices)  
RN 121162-23-0 CAPLUS  
CN 1,3-isobenzofurandione, 5,5'-sulfonylbis-, polymer with 4-[3-[4-(4-aminophenoxy)phenoxy]phenoxy]benzenamine (9CI) (CA INDEX NAME)

CM 1

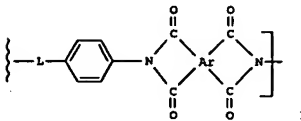
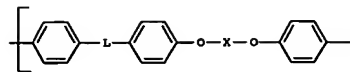
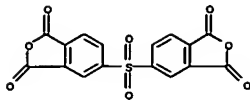
CRN 121162-22-9  
CMF C24 H20 N2 O3



CM 2

CRN 2540-99-0  
CMF C16 H6 O8 S





AB A long chain aromatic diamine having divalent radicals that bond 4 benzene rings and 1 pyridine ring or 1 benzonitrile ring reacts with polycarboxylic reactant to give title thermoplastic polyimide, optionally containing reinforcing agents. The repeat structural units are represented by

1 (L = O, carbonyl, isopropylidene or hexafluoroisopropylidene, and X = N or CN, and Ar = a tetravalent radical having 6-27 C atoms and being selected from the group consisting of a monoarom. radical, condensed polyarom. radical and noncondensed polyarom. radical having aromatic radicals connected to each other with a direct bond or a bridge member). The copolyimide of 0.05 mol 2,6-bis[4-(4-amino- $\alpha,\alpha$ -dimethylbenzyl)phenoxy]benzonitrile hydrochloride and 0.048 mol pyromellitic dianhydride had inherent viscosity (p-chlorophenol/PhOH 0.5 g/100mL at 35°) 0.61 dL/g, glass transition temperature 263°, 5% weight loss temperature 504°, flow initiation temperature 345°, and 400° melt viscosity 29,300 P.

ACCESSION NUMBER: 1995:890104 CAPLUS  
DOCUMENT NUMBER: 123:287276  
TITLE: Polyimide with good processability and heat resistance  
INVENTOR(S): Yamashita, Wataru; Okawa, Yuichi; Tami, Shoji; Matsuo, Mitsunori; Ishida, Tautomu; Karasawa, Akio; Yamaguchi, Keizaburo; Yamaguchi, Akihiro  
PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Inc., Japan  
SOURCE: Eur. Pat. Appl., 48 pp.  
CODEN: EPOXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

L30 ANSWER 8 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

EP 659802	A1	19950628	EP 1994-309548	19941220
EP 659802	B1	19990317		
R: DE, FR, GB				
JP 08081556	A2	19960326	JP 1994-307761	19941212
JP 3142046	B2	20010307		
US 5508377	A	19960416	US 1994-357193	19941213
US 5631377	A	19970520	US 1995-450150	19950526
JP 2001064247	A2	20010313	JP 2000-201786	20000704
JP 3563015	B2	20040908		

PRIORITY APPLN. INFO.:

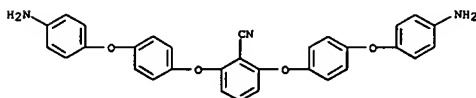
JP 1993-322631	A	19931221
JP 1993-335511	A	19931228
JP 1994-160313	A	19940712
JP 1994-160960	A	19940713
JP 1994-307761	A3	19941212
US 1994-357193	A3	19941213

IT 169680-32-4P 169680-34-6P 169680-38-0P  
169680-57-3P 169680-58-4P 169680-59-5P  
169680-60-8P 169680-62-0P  
KL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation) ((reinforced) amorphous polyimide with good processability and heat resistance)

RN 169680-32-4 CAPLUS  
CN Benzonitrile, 2,6-bis[4-(4-aminophenoxy)phenoxy]-, polymer with [5,5'-biisobenzofuran]-1,1',3,3'-tetrone (9CI) (CA INDEX NAME)

CM 1

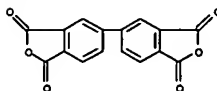
CRN 169680-31-3  
CMF C31 H23 N3 O4



CM 2

CRN 2420-87-3  
CMF C16 H6 O6

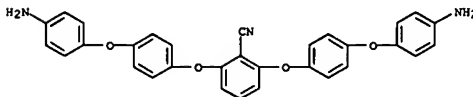
L30 ANSWER 8 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 169680-34-6 CAPLUS  
CN Benzonitrile, 2,6-bis[4-(4-aminophenoxy)phenoxy]-, polymer with 5,5'-carbonylbis[1,3-isobenzofurandione] (9CI) (CA INDEX NAME)

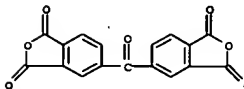
CM 1

CRN 169680-31-3  
CMF C31 H23 N3 O4



CM 2

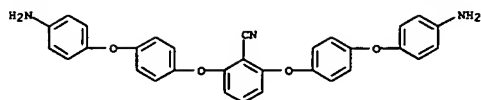
CRN 2421-28-5  
CMF C17 H6 O7



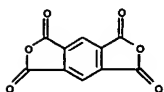
RN 169680-38-0 CAPLUS  
CN Benzonitrile, 2,6-bis[4-(4-aminophenoxy)phenoxy]-, polymer with 1H,3H-benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone (9CI) (CA INDEX NAME)

CM 1

CRN 169680-31-3  
CMF C31 H23 N3 O4

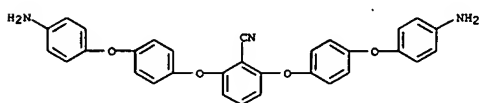


CM 2  
CRN 89-32-7  
CMF C10 H2 O6

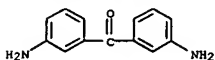
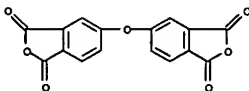


RN 169680-57-3 CAPLUS  
CN Benzonitrile, 2,6-bis[4-([1-(4-aminophenyl)-1-methylethyl]phenoxy)]-, polymer with 4,4'-oxybis(benzenamine) and 5,5'-oxybis[1,3-isobenzofurandione] (9CI) (CA INDEX NAME)

CM 1  
CRN 169680-31-3  
CMF C31 H23 N3 O4

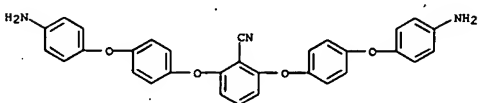


CM 2  
CRN 1823-59-2  
CMF C16 H6 O7

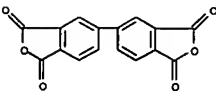


RN 169680-59-5 CAPLUS  
CN Benzonitrile, 2,6-bis[4-([1-(4-aminophenyl)-1-methylethyl]phenoxy)]-, polymer with [5,5'-biisobenzofuran]-1,1',3,3'-tetrone and 5,5'-oxybis[1,3-isobenzofurandione] (9CI) (CA INDEX NAME)

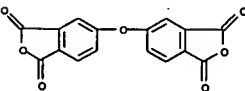
CM 1  
CRN 169680-31-3  
CMF C31 H23 N3 O4



CM 2  
CRN 2420-87-3  
CMF C16 H6 O6

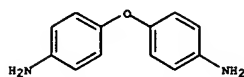


CM 3  
CRN 1823-59-2  
CMF C16 H6 O7



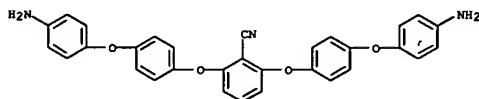
RN 169680-60-8 CAPLUS  
CN Benzonitrile, 2,6-bis[4-([1-(4-aminophenyl)-1-methylethyl]phenoxy)]-,

CM 3  
CRN 101-80-4  
CMF C12 H12 N2 O

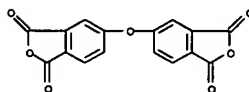


RN 169680-58-4 CAPLUS  
CN Benzonitrile, 2,6-bis[4-([1-(4-aminophenyl)-1-methylethyl]phenoxy)]-, polymer with bis(3-aminophenyl)methanone and 5,5'-oxybis[1,3-isobenzofurandione] (9CI) (CA INDEX NAME)

CM 1  
CRN 169680-31-3  
CMF C31 H23 N3 O4

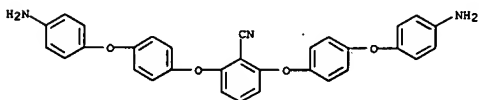


CM 2  
CRN 1823-59-2  
CMF C16 H6 O7

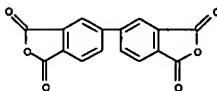


CM 3  
CRN 611-79-0  
CMF C13 H12 N2 O

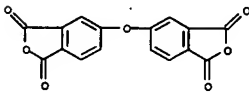
CM 1  
CRN 169680-31-3  
CMF C31 H23 N3 O4



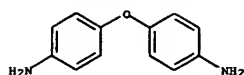
CM 2  
CRN 2420-87-3  
CMF C16 H6 O6



CM 3  
CRN 1823-59-2  
CMF C16 H6 O7



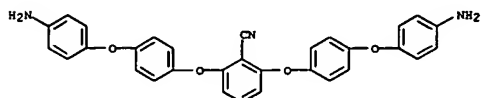
CM 4  
CRN 101-80-4  
CMF C12 H12 N2 O



RN 169680-62-0 CAPLUS  
CN Benzonitrile, 2,6-bis[4-(4-aminophenoxy)phenoxy]-, polymer with 5,5'-oxybis[1,3-isobenzofurandione] (9CI) (CA INDEX NAME)

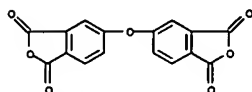
CM 1

CRN 169680-31-3  
CMF C31 H23 N3 O4



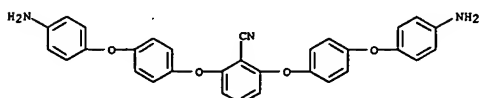
CM 2

CRN 1823-59-2  
CMF C16 H6 O7



IT 169680-31-3P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (preparation and polymerization)

RN 169680-31-3 CAPLUS  
CN Benzonitrile, 2,6-bis[4-(4-aminophenoxy)phenoxy]- (9CI) (CA INDEX NAME)



\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The title photoreceptors comprise a conductive support coated with a photosensitive layer containing a bisazo compound I (K1, K2 = OR-containing coupler residue having a group with coupling ability, 1 of K1 and K2 is II (Y = divalent N-contg heterocycle which may be substituted, divalent aromatic hydrocarbon which may be substituted); X = divalent group having ≥2 groups selected from III and IV; R1, R2 = H, halo, (substituted) alkyl, (substituted) alkoxy, (substituted) aryl; the benzene rings A, B, and C may have substituents). The photoreceptors show high photosensitivity

and good durability in repeated use. Thus, an Al vapor-deposited polyester film was coated with a charge-generating layer containing V and with a charge-transferring layer containing a hydrazone compound to give a photoreceptor.

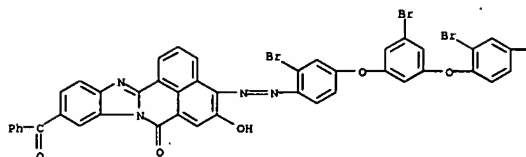
ACCESSION NUMBER: 1995:849478 CAPLUS  
DOCUMENT NUMBER: 124:215963  
TITLE: Electrophotographic photoreceptors using novel bisazo compound  
INVENTOR(S): Rin, Mamoru; Tanaka, Noriko  
PATENT ASSIGNEE(S): Mitsubishi Kagaku KK, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JYXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07168378	A2	19950704	JP 1993-316552	19931216

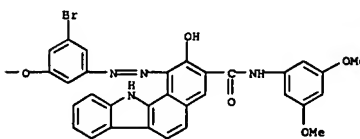
PRIORITY APPLN. INFO.: JP 1993-316552 19931216

IT 170588-35-9  
RL: DEV (Device component use); USES (Uses) (electrophotog. photoreceptor containing bisazo compound as charge-generating agent)  
RN 170588-35-9 CAPLUS  
CN 11H-Benzo[a]carbazole-3-carboxamide, 1-[[3-[4-[3-[4-[10-benzoyl-5-hydroxy-7-oxo-7H-benzimidazo[2,1-a]benz[de]isoquinolin-4-yl]azo]-3-bromophenoxy]-5-bromophenoxy]-3-bromophenoxy]-5-bromophenyl]azo]-N-(3,5-dimethoxyphenyl)-2-hydroxy- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L30 ANSWER 10 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN

AB A method of preparing 5-nitroresorcinol diaryl ethers bearing both different

and equal substituents was elaborated. The method is based on the nucleophilic substitution of a nitro group in 1,3,5-(O<sub>2</sub>N)<sub>3</sub>C<sub>6</sub>H<sub>3</sub> or in 3,5-dinitrophenyl aryl ethers by phenols in the presence of a base. Similarly, tris-Ph ether of phloroglucinol was obtained from 1-nitro-3,5-diphenoxybenzene.

ACCESSION NUMBER: 1995:656708 CAPLUS

DOCUMENT NUMBER: 123:256255

TITLE: Phenol substitution of nitro groups in 1,3,5-trinitrobenzene - method of preparation of 5-nitroresorcinol diaryl ethers and 3,5-dinitrophenyl aryl ethers

AUTHOR(S): Shevelev, S. A.; Dutov, M. D.; Vatsadze, I. A.;

SERUSHKINA, O. V.; KORELEV, M. A.; RUSANOV, A. L. N. D. Zelinsky Inst. Org. Chem., Moscow, 117913, Russia

SOURCE: Izvestiya Akademii Nauk, Seriya Khimicheskaya (1995), (2), 393-4

CODEN: IASKEA

PUBLISHER: Institut Organicheskoi Khimii im. N. D. Zelinskogo

Rossiiskoi Akademii Nauk

DOCUMENT TYPE: Journal

LANGUAGE: Russian

OTHER SOURCE(S): CASREACT 123:256255

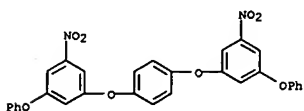
IT 168839-63-2P

RL: SPN (Synthetic preparation); PREP (Preparation) (phenol substitution of nitro groups in trinitrobenzene in preparation of

nitroresorcinol diaryl ethers and dinitrophenyl aryl ethers)

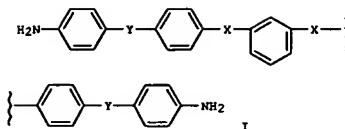
RN 168839-63-2 CAPLUS

CN: Benzene, 1,4-bis(3-nitro-5-phenoxyphenoxy)- (9CI) (CA INDEX NAME)



L30 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN

GI



AB Aromatic diamine I (X, Y = O, S, CH<sub>2</sub>) is synthesized and condensed with aromatic tetracarboxylic dianhydrides to provide polyamic acids; the polyamic acids

then are converted to the corresponding polyimides upon heating. The polyimides have higher T<sub>g</sub> and good processability and can be molded to become films. 1,3-Bis[4-(4-aminophenoxy)phenoxy]benzene was synthesized by reacting 1,3,5-trichlorobenzene with 4-amino-4'-hydroxydiphenyl ether followed by reductive dehalogenation and was polymerized with 3,3',4,4'-benzophenonetetracarboxylic dianhydride.

ACCESSION NUMBER: 1995:621619 CAPLUS

DOCUMENT NUMBER: 123:287259

TITLE: Aromatic diamines, polyimides, their manufacture, and utilization

INVENTOR(S): Matsuo, Mitsuki; Yamaguchi, Keisaburo; Yamaguchi, Teruhiko; Yamashita, Wataru; Oikawa, Juichi; Oikawa, Hideaki; Asanuma, Tadashi

PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKOXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07026018	A2	19950127	JP 1993-170429	19930709
JP 3302109	B2	20020715		

PRIORITY APPLN. INFO.: JP 1993-170429 19930709

OTHER SOURCE(S): MARPAT 123:287259

IT 157405-51-IDP, reaction products with phthalic anhydride

163918-05-EDP, reaction products with phthalic anhydride

163918-05-6P 163918-08-EDP, reaction products with phthalic anhydride

RL: IMF (Industrial manufacture); PREP (Preparation)

(aromatic diamines, polyimides, their manufacture, and utilization)

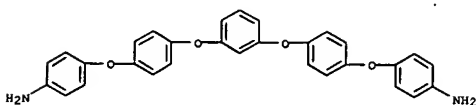
RN 157405-51-1 CAPLUS

CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[1,3-phenylenebis(oxy-4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

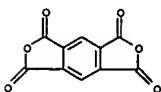
L30 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

CRN 157405-50-0  
CMF C30 H24 N2 O4



CM 2

CRN 89-32-7  
CMF C10 H2 O6

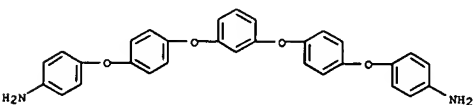


RN 163918-05-6 CAPLUS

CN 1,3-Isobenzofurandione, 5,5'-oxybis-, polymer with 4,4'-[1,3-phenylenebis(oxy-4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

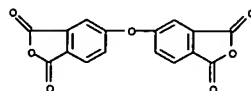
CRN 157405-50-0  
CMF C30 H24 N2 O4



CM 2

CRN 1823-59-2  
CMF C16 H6 O7

L30 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

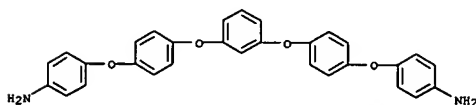


RN 163918-05-6 CAPLUS

CN 1,3-Isobenzofurandione, 5,5'-oxybis-, polymer with 4,4'-[1,3-phenylenebis(oxy-4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

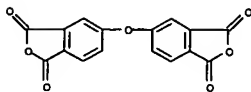
CM 1

CRN 157405-50-0  
CMF C30 H24 N2 O4



CM 2

CRN 1823-59-2  
CMF C16 H6 O7

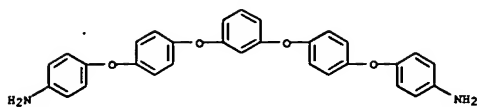


RN 163918-08-9 CAPLUS

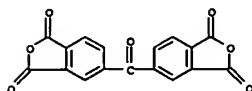
CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with 4,4'-[1,3-phenylenebis(oxy-4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 157405-50-0  
CMF C30 H24 N2 O4



CM 2

CRN 2421-28-5  
CHF C17 H6 O7

IT 157405-50-0P 163918-04-5P

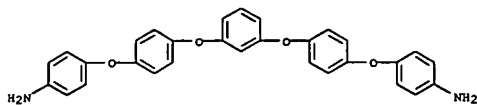
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation);

RACT (Reactant or reagent)

(aromatic diamines, polyimides, their manufacture, and utilization)

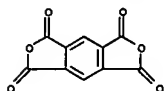
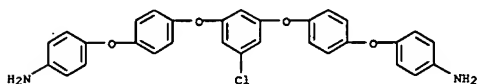
RN 157405-50-0 CAPIUS

CN Benzenamine, 4,4'-[1,3-phenylenebis(oxy-4,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)



RN 163918-04-5 CAPIUS

CN Benzenamine, 4,4'-[(5-chloro-1,3-phenylene)bis(oxy-4,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)



AB When a number of polyimides were prepared using diamines containing 5 benzene

rings, only the polyimide prepared from 1,2,4,5-benzenetetracarboxylic dianhydride (I) and 1,3-bis[4-(4'-aminophenoxy)cumyl]benzene (II) showed

a liquid crystalline phase. This thermotropic polyimide showed a liquid crystal

phase at 549-593 K. Mixing this liquid crystal polyimide with Aurum polyimide or copolyim. II with I and 4,4'-bis(3-aminophenoxy)biphenyl

produced resins with improved melt processability.

ACCESSION NUMBER: 1994:534912 CAPIUS

DOCUMENT NUMBER: 121:134912

TITLE: Synthesis of thermotropic liquid crystal polyimide

and

its properties

AUTHOR(S): Asanuma, Tadashi; Oikawa, Hideaki; Oikawa, Yuuichi; Yamasita, Wataru; Matsuo, Mitunori; Yamaguchi,

Akihiro

CORPORATE SOURCE: Central Research Institute, Mitsui Toatsu Chemicals Inc., Yokohama, 247, Japan

SOURCE: Journal of Polymer Science, Part A: Polymer

Chemistry

(1994), 32(11), 2111-18

CODEN: JPACEC; ISSN: 0887-624X

DOCUMENT TYPE: Journal

LANGUAGE: English

IT 157405-51-1P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation and characterization of)

RN 157405-51-1 CAPIUS

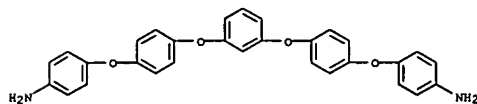
CN 1H,3H-Benzotriazole[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with

4,4'-[1,3-phenylenebis(oxy-4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1

CRN 157405-50-0

CHF C30 H24 N2 O4



CM 2

CRN 89-32-7

CHF C10 H2 O6

AB Self-crosslinkable aromatic F-containing polyethers containing pendent triazene

groups were prepared by nucleophilic substitution of the polyethers with 1-[4-(4-hydroxyphenoxy)phenylene]triazene derivs. in the presence of

K2CO3

in AcNMe2. The degree of crosslinking can be controlled by varying the concentration of the pendent phenylenetriazene groups in the polymer.

After

curing, the flexible polymer films (.apprx.10 µm thick) exhibit high gel contents, increased glass transition temps., improved resistance to organic solvents, and little change in dielec. constant and thermal stability.

These self-crosslinkable polyethers are potential candidates for electronic applications.

ACCESSION NUMBER: 1994:410125 CAPIUS

DOCUMENT NUMBER: 121:10125

TITLE: Self-crosslinkable poly(arylene ether)s containing

pendent phenylenetriazene groups

Leu, Aldrich W. K.; Vo, Lanchi P.; Fone, Matilda M.;

Duff, David W.; Merlino, Gloria

CORPORATE SOURCE: Raychem Corp., Menlo Park, CA, 94025-1164, USA

SOURCE: Journal of Polymer Science, Part A: Polymer

Chemistry

(1994), 32(8), 1507-21

CODEN: JPACEC; ISSN: 0887-624X

DOCUMENT TYPE: Journal

LANGUAGE: English

IT 155828-46-9P

RL: SPN (Synthetic preparation); PREP (Preparation)

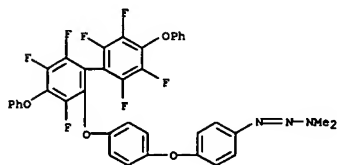
(preparation of, as model compound for self-crosslinkable aromatic

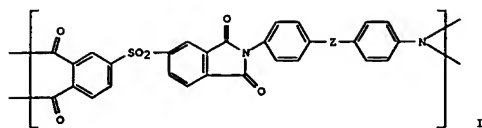
fluoropolymer-polyethers)

RN 155828-46-9 CAPIUS

CN 1-Triazene, 1-[4-[4-[(2',3',3',5',5',6',6'-heptafluoro-4,4'-diphenoxy[1,1'-

biphenyl]-2-yl)oxy]phenoxy]phenyl]-3,3-dimethyl- (9CI) (CA INDEX NAME)





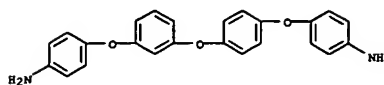
AB The title compns. with good heat resistance and elec. and mech. characteristics contain polyimides of repeating unit I (Z = S, SC6H4S, CH2C6H4CH2, XC6H4YC6H4X; X = O, S, CR1R2; Y = direct bond, O, S, SO2, CR1R2, CO; R1, R2 = H, halogen, C1-5 haloalkyl) and intrinsic viscosity 0.3-5.0 dL/g, dissolved in organic solvent(s), and prepared by imidation in an aprotic polar organic solvent and/or phenolic solvent. 4,4'-Bis(p-aminophenoxy)diphenyl sulfone was polymerized with di-Ph sulfone-3,3',4,4'-tetracarboxylic dianhydride in N-methylpyrrolidone at 25-30° for 1 h then heated at 160° for 5 h to give a polyimide solution. The polyimide had intrinsic viscosity (5 g/100 mL N-methylpyrrolidone, 25°) 0.7., decomposition temperature 565°, softening temperature 285°, tensile strength 12.2 kg/mm<sup>2</sup>, and modulus 271 kg/mm<sup>2</sup>.

ACCESSION NUMBER: 1989:458573 CAPLUS  
DOCUMENT NUMBER: 111:58573  
TITLE: Soluble polyimide composition and its manufacture  
INVENTOR(S): Ikeda, Tsuyoshi; Sanami, Hiroshi; Nakazawa, Mikiro; Kawashima, Yuji  
PATENT ASSIGNEE(S): New Japan Chemical Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.  
CODEN: J000AF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 64000121	A2	19890105	JP 1988-31591	19880213
PRIORITY APPLN. INFO.:			JP 1987-32030	A1 19870213

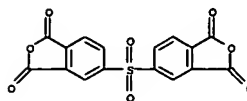
IT 121162-23-0P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(manufacture of, soluble, heat-resistant)  
RN 121162-23-0 CAPLUS  
CN 1,3-Isobenzofurandione, 5,5'-sulfonylbis-, polymer with  
4-[3-[4-(4-aminophenoxy)phenoxy]phenoxy]benzenamine (9CI) (CA INDEX NAME)

CH 1



CH 2

CRN 2540-99-0  
CHF C16 H6 O8 S



=> fil reg		
COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	71.86	1432.42
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-10.22	-40.88

FILE 'REGISTRY' ENTERED AT 19:46:27 ON 12 JAN 2005  
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
 COPYRIGHT (C) 2005 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 10 JAN 2005 HIGHEST RN 811411-12-8  
 DICTIONARY FILE UPDATES: 10 JAN 2005 HIGHEST RN 811411-12-8

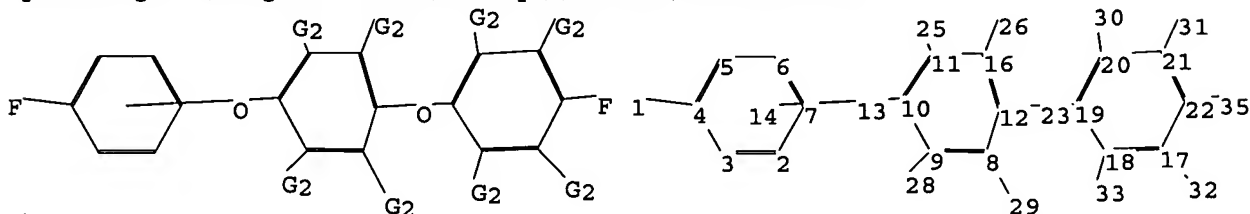
TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>  
 Uploading C:\Program Files\Stnexp\Queries\10718532.str



chain nodes :  
 1 13 23 25 26 28 29 30 31 32 33 35  
 ring nodes :  
 2 3 4 5 6 7 8 9 10 11 12 16 17 18 19 20 21 22  
 chain bonds :  
 1-4 8-29 9-28 10-13 11-25 12-23 16-26 17-32 18-33 19-23 20-30 21-31  
 22-35  
 ring bonds :  
 2-3 2-7 3-4 4-5 5-6 6-7 8-9 8-12 9-10 10-11 11-16 12-16 17-18 17-22  
 18-19 19-20 20-21 21-22  
 exact/norm bonds :  
 8-29 9-28 10-13 11-25 12-23 16-26 17-32 18-33 19-23 20-30 21-31  
 exact bonds :  
 1-4 22-35

normalized bonds :

2-3 2-7 3-4 4-5 5-6 6-7 8-9 8-12 9-10 10-11 11-16 12-16 17-18 17-22  
18-19 19-20 20-21 21-22

G1:N,X

G2:X,Ak,H

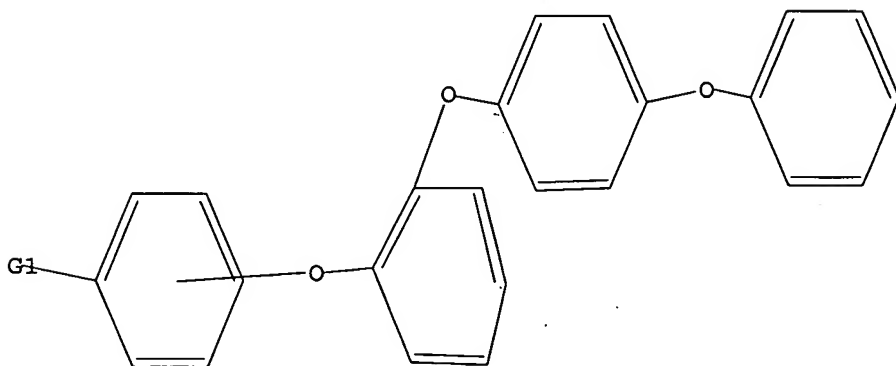
Match level :

1:CLASS 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom  
11:Atom 12:Atom 13:CLASS 14:CLASS 16:CLASS 17:Atom 18:Atom 19:Atom 20:Atom  
21:Atom 22:Atom 23:CLASS 25:CLASS 26:CLASS 28:CLASS 29:CLASS 30:CLASS  
31:CLASS 32:CLASS 33:CLASS 35:CLASS

L31 STRUCTURE UPLOADED

=> d query

L31 STR



G1 N,X

Structure attributes must be viewed using STN Express query preparation.

=> s l31

SAMPLE SEARCH INITIATED 19:47:23 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 5834 TO ITERATE

17.1% PROCESSED 1000 ITERATIONS  
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 112101 TO 121259  
PROJECTED ANSWERS: 0 TO 0

L32 0 SEA SSS SAM L31



=> s l31 full  
FULL SEARCH INITIATED 19:47:28 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 117527 TO ITERATE

100.0% PROCESSED 117527 ITERATIONS  
SEARCH TIME: 00.00.01

10 ANSWERS

L33 10 SEA SSS FUL L31

=> fil caplus  
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
161.76	1594.18

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
0.00	-40.88

CA SUBSCRIBER PRICE

FILE 'CAPLUS' ENTERED AT 19:47:32 ON 12 JAN 2005  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 12 Jan 2005 VOL 142 ISS 3  
FILE LAST UPDATED: 11 Jan 2005 (20050111/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l33

L34 4 L33

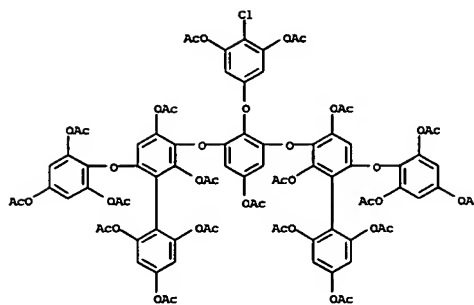
=> d l34 1-4 abs ibib hitstr

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

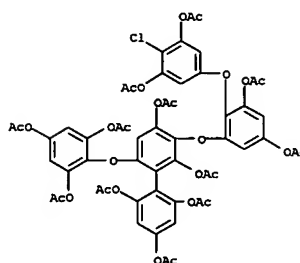
AB From an Et acetate fraction of the brown alga *Cystophora retroflexa* several halogenated phlorotannins were isolated. Most of the compds. are derivs. of diphlorethol pentaacetate and triphlorethol-A heptaacetate. The majority were chlorinated and/or brominated. Only one iodinated substance, 2-iodophloroglucinol triacetate, was isolated. The structure of this derivative and the following compds. have been characterized previously: 2[D]-bromodiphlorethol pentaacetate, 3[Al]-bromodiphlorethol pentaacetate, 4[D]-bromodiphlorethol pentaacetate, 4[D]-chlorodiphlorethol pentaacetate, 3[Al]-chlorotriphlorethol-A heptaacetate, 4[D]-bromotriphlorethol-A heptaacetate and 4[D]-chlorobisfucopentaphlorethol-A nonadecaacetate. Ten halogenated phlorethols and two chlorinated fucophlorethols are described for the first time and characterized as their acetates: 2[B]-bromotriphlorethol-A heptaacetate (I), 2[D]-bromotriphlorethol-A heptaacetate, 2[B], 2[D]-dibromotriphlorethol-A heptaacetate, 3[Al], 5[Al]-dichlorotriphlorethol-A heptaacetate (II), 3[Al], 4[D]-dichlorotriphlorethol-A heptaacetate, 3[Al]-chloro-4[D]-bromotriphlorethol-A heptaacetate, 2[B], 4[D]-dichlorotriphlorethol-A heptaacetate, 2[D], 3[Al]-dibromotriphlorethol-A heptaacetate, 3[Al]-bromo-2[D]-chlorotriphlorethol-A heptaacetate, 2[D]-bromotetraphlorethol-C nonadecaacetate, 4[D]-chlorofucotriphlorethol-B dodecaacetate (III) and 4[D]-chlorofucotriphlorethol-B dodecaacetate (IV).

ACCESSION NUMBER: 1999:707495 CAPLUS  
DOCUMENT NUMBER: 132:134417  
TITLE: Halogenated phlorethols and fucophlorethols from the brown alga *Cystophora retroflexa*  
AUTHOR(S): Sailer, Birgit; Glombitza, Karl-Werner  
CORPORATE SOURCE: Institut für Pharmazeutische Biologie, Bonn, D-53115, Germany  
SOURCE: Natural Toxins (1999), 7(2), 57-62  
CODEN: NATOXE; ISSN: 1056-9014  
PUBLISHER: John Wiley & Sons Ltd.  
DOCUMENT TYPE: Journal  
LANGUAGE: English

IT 202211-26-5  
RL: BOC (Biological occurrence); BSU (Biological study, unclassified);  
BIOL (Biological study); OCCU (Occurrence)  
PRP (halogenated phlorethols and fucophlorethols from the brown alga *Cystophora retroflexa*)  
RN 202211-26-5 CAPLUS  
CN [1,1'-Biphenyl]-2,2',4,4',6-pentol, 3',3'''-[[5-(acetyloxy)-2-[3,5-bis(acetyloxy)-4-chlorophenoxy]-1,3-phenylene]bis(oxy)]bis[6'-(2,4,6-tris(acetyloxy)phenoxy)-, decaacetate (9CI) (CA INDEX NAME)]

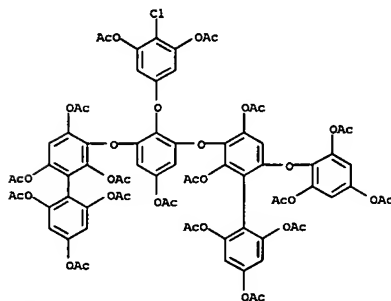


IT 256448-70-1 256448-71-2  
RL: BOC (Biological occurrence); BSU (Biological study, unclassified);  
PRP (Properties); BIOL (Biological study); OCCU (Occurrence)  
(halogenated phlorethols and fucophlorethols from the brown alga *Cystophora retroflexa*)  
RN 256448-70-1 CAPLUS  
CN [1,1'-Biphenyl]-2,2',4,4',6-pentol, 3'-[3,5-bis(acetyloxy)-2-[3,5-bis(acetyloxy)-4-chlorophenoxy]phenoxy]-6'-(2,4,6-tris(acetyloxy)phenoxy)-, pentaacetate (9CI) (CA INDEX NAME)



RN 256448-71-2 CAPLUS  
CN [1,1'-Biphenyl]-2,2',4,4',6,6'-hexol, 3-[5-(acetyloxy)-2-[3,5-

L34 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)  
AB The brown alga *Sargassum spinuligerum* contains a variety of fucalols. In addition to these compds., a number of fucophlorethols were isolated in the form of their peracetylated deriva. and identified by means of spectral anal. The following phlorotannins were identified: the known, fucophlorethol B octa-acetate, fucodiphlorethol B, D and F deca-acetates, hydroxyfucodiphlorethol A undeca-acetate, bisfucotriphlorethol A pentadeca-acetate, hydroxybisfucophlorethol A hexadeca-acetate, bisfucotetraphlorethol A heptadeca-acetate and the new compds., dihydroxyfucotriphlorethol A and B tetradeca-acetates, bisfucopentaphlorethol B nonadeca-acetate, chlorobisfucopentaphlorethol A nonadeca-acetate, difucodiphlorethol A trideca-acetate and fucodifucotetraphlorethol A icosadeca-acetate. Bisfucotriphlorethol A pentadeca-acetate, chlorobisfucopentaphlorethol A nonadeca-acetate and fucodifucotetraphlorethol A icosadeca-acetate were also isolated from the brown alga *Cystophora torulosa*.

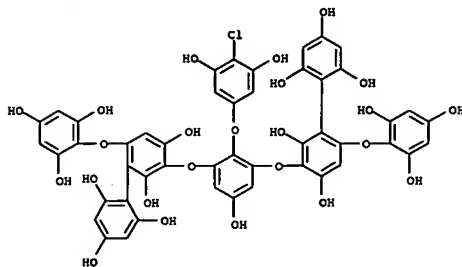


REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT

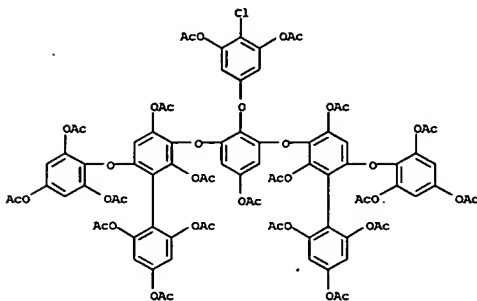
L34 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN  
AB The brown alga *Sargassum spinuligerum* contains a variety of fucalols. In addition to these compds., a number of fucophlorethols were isolated in the form of their peracetylated deriva. and identified by means of spectral anal. The following phlorotannins were identified: the known, fucophlorethol B octa-acetate, fucodiphlorethol B, D and F deca-acetates, hydroxyfucodiphlorethol A undeca-acetate, bisfucotriphlorethol A pentadeca-acetate, hydroxybisfucophlorethol A hexadeca-acetate, bisfucotetraphlorethol A heptadeca-acetate and the new compds., dihydroxyfucotriphlorethol A and B tetradeca-acetates, bisfucopentaphlorethol B nonadeca-acetate, chlorobisfucopentaphlorethol A nonadeca-acetate, difucodiphlorethol A trideca-acetate and fucodifucotetraphlorethol A icosadeca-acetate. Bisfucotriphlorethol A pentadeca-acetate, chlorobisfucopentaphlorethol A nonadeca-acetate and fucodifucotetraphlorethol A icosadeca-acetate were also isolated from the brown alga *Cystophora torulosa*.

ACCESSION NUMBER: 1997:808955 CAPLUS  
DOCUMENT NUMBER: 128:138419  
TITLE: Fucophlorethols from the brown algae *Sargassum spinuligerum* and *Cystophora torulosa*  
AUTHOR(S): Glombitza, Karl-Werner; Keusgen, Michael; Hauperich, Sabine  
CORPORATE SOURCE: Institut für Pharmazeutische Biologie, Bonn, D-53115, Germany  
SOURCE: Phytochemistry (1997), 46(8), 1417-1422  
CODEN: PHYCAS; ISSN: 0031-9422  
PUBLISHER: Elsevier Science Ltd.  
DOCUMENT TYPE: Journal  
LANGUAGE: English

IT 202337-14-2, Chlorobisfucopentaphlorethol A  
RL: BOC (Biological occurrence); BSU (Biological study, unclassified);  
BIOL (Biological study); OCCU (Occurrence)  
PRP (fucophlorethols from the brown algae *Sargassum spinuligerum* and *Cystophora torulosa*)  
RN 202337-14-2 CAPLUS  
CN [1,1'-Biphenyl]-2,2',4,4',6-pentol, 3',3'''-[[2-(4-chloro-3,5-dihydroxyphenoxy)-5-hydroxy-1,3-phenylene]bis(oxy)]bis[6'-(2,4,6-trihydroxyphenoxy)- (9CI) (CA INDEX NAME)]



IT 202211-26-5P, Chlorobisfucopentaphlorethol A nonadeca-acetate  
 RL: PRP (Properties); PUR (Purification or recovery); PREP (Preparation)  
 (fucophlorethols from the brown algae *Sargassum spinuligerum* and  
*Cystophora torulosa*)  
 RN 202211-26-5 CAPLUS  
 CN [1,1'-Biphenyl]-2,2',4,4',6-pentol, 3',3'''-[5-(acetyloxy)-2-[3,5-  
 bis(acetyloxy)-4-chlorophenoxy]-1,3-phenylene]bis(oxy)]bis[6'-[2,4,6-  
 tris(acetyloxy)phenoxy]-, decaacetate (9CI) (CA INDEX NAME)



REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
 FORMAT

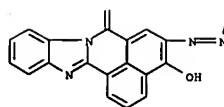
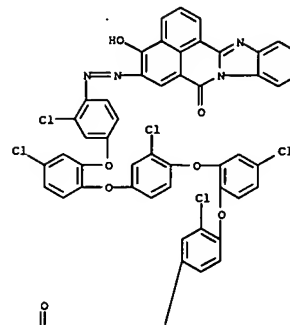
\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The title photoreceptors comprise a conductive support coated with a  
 photosensitive layer containing a bisazo compound I [K1, K2 =  
 OH-containing coupler  
 residue having a group with coupling ability, 1 of K1 and K2 is II (Y =  
 divalent N-contg heterocycle which may be substituted, divalent aromatic  
 hydrocarbon which may be substituted); X = divalent group having ≥2  
 groups selected from III and IV; R1, R2 = H, halo, (substituted) alkyl,  
 (substituted) alkoxy, (substituted) aryl; the benzene rings A, B, and C  
 may have substituents]. The photoreceptors show high photosensitivity  
 and  
 good durability in repeated use. Thus, an Al vapor-deposited polyester  
 film was coated with a charge-generating layer containing V and with a  
 charge-transporting layer containing a hydrazone compound to give a  
 photoreceptor.

ACCESSION NUMBER: 1995:849478 CAPLUS  
 DOCUMENT NUMBER: 124:215963  
 TITLE: Electrophotographic photoreceptors using novel bisazo  
 Compound  
 INVENTOR(S): Rin, Mamoru; Tanaka, Noriko  
 PATENT ASSIGNEE(S): Mitsubishi Kagaku KK, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07168378	A2	19950704	JP 1993-316552	19931216
PRIORITY APPLN. INFO.:			JP 1993-316552	19931216

IT 170969-23-0  
 RL: DEV (Device component use); USES (Uses)  
 (electrophotog. photoreceptor containing bisazo compound as  
 charge-generating  
 agent)  
 RN 170969-23-0 CAPLUS  
 CN 7H-Benzimidazo[2,1-a]benz[de]isoquinolin-7-one, 9-(10-, 11 or  
 12)-chloro-5-[2-chloro-4-[4-chloro-2-[2-chloro-4-[4-chloro-2-[3-chloro-4-  
 [9-(10-, 11 or 12)-chloro-4-hydroxy-7-oxo-7H-benzimidazo[2,1-  
 a]benz[de]isoquinolin-5-yl]azo]phenoxy]phenoxy]phenoxy]phenyl]azo]-  
 4-hydroxy- (9CI) (CA INDEX NAME)



2 (D1-C1)

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Title compds. I, useful as material for hardeners for fluorinated epoxy resins (no data), is prepared via II [R = cyano, CO<sub>2</sub>H]. Thus, a mixture of

tetrafluorophthalonitrile, tetrafluorohydroquinone, and Et<sub>3</sub>N in DMF was heated at 35° for 30 to give 21% II [R = cyano], which was treated with 60% H<sub>2</sub>SO<sub>4</sub> at 150° for 5 h to give 26% II [R = CO<sub>2</sub>H], which was refluxed with Ac<sub>2</sub>O for 2 h to 52% I.

ACCESSION NUMBER: 1994:630662 CAPLUS

DOCUMENT NUMBER: 121:230662

TITLE: preparation of a perfluorinated hexacarboxylic acid as

material for hardeners for fluorinated epoxy resins

INVENTOR(S): Sasaki, Shigekuni; Matsura, Tooru; Ando, Shinji

PATENT ASSIGNEE(S): Nippon Telegraph &amp; Telephone, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JTOOAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06157501	A2	19940603	JP 1992-340986	19921130

PRIORITY APPLN. INFO.: JP 1992-340986 19921130

OTHER SOURCE(S): CASREACT 121:230662

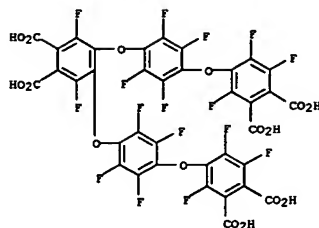
IT 158394-12-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and conversion into trianhydride)

RN 158394-12-8 CAPLUS

CN 1,2-Benzenedicarboxylic acid, 4,5-bis[4-(3,4-dicarboxy-2,5,6-trifluorophenoxy)-2,3,5,6-tetrafluorophenoxy]-3,6-difluoro- (9CI) (CA INDEX NAME)



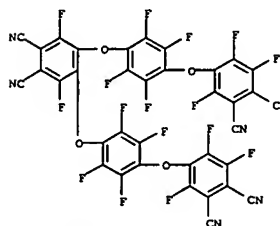
IT 158394-11-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and hydrolysis of)

RN 158394-11-7 CAPLUS

CN 1,2-Benzenedicarbonitrile, 4,5-bis[4-(3,4-dicyano-2,5,6-trifluorophenoxy)-2,3,5,6-tetrafluorophenoxy]-3,6-difluoro- (9CI) (CA INDEX NAME)



IT 158394-13-9P

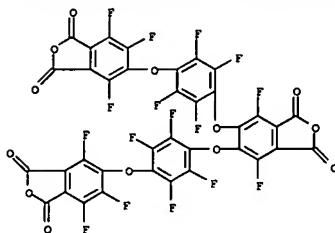
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(preparation of a perfluorinated hexacarboxylic acid as material)

RN 158394-13-9 CAPLUS

CN 1,3-isobenzofurandione, 4,7-difluoro-5,6-bis[2,3,5,6-tetrafluoro-4-[(4,6,7-trifluoro-1,3-dihydro-1,3-dioxo-5-isobenzofuranyl)oxy]phenoxy]- (9CI)

(CA INDEX NAME)



=> fil reg  
COST IN U.S. DOLLARS  
FULL ESTIMATED COST

SINCE FILE ENTRY	TOTAL SESSION
20.21	1614.39

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)  
CA SUBSCRIBER PRICE

SINCE FILE ENTRY	TOTAL SESSION
-2.92	-43.80

FILE 'REGISTRY' ENTERED AT 19:48:14 ON 12 JAN 2005  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2005 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 10 JAN 2005 HIGHEST RN 811411-12-8  
DICTIONARY FILE UPDATES: 10 JAN 2005 HIGHEST RN 811411-12-8

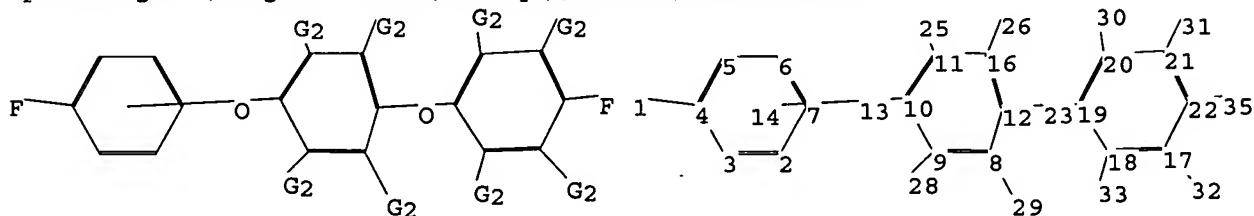
TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>  
Uploading C:\Program Files\Stnexp\Queries\10718532.str



chain nodes :

1 13 23 25 26 28 29 30 31 32 33 35

ring nodes :

2 3 4 5 6 7 8 9 10 11 12 16 17 18 19 20 21 22

chain bonds :

1-4 8-29 9-28 10-13 11-25 12-23 16-26 17-32 18-33 19-23 20-30 21-31  
22-35

ring bonds :

2-3 2-7 3-4 4-5 5-6 6-7 8-9 8-12 9-10 10-11 11-16 12-16 17-18 17-22  
18-19 19-20 20-21 21-22

exact/norm bonds :

8-29 9-28 10-13 11-25 12-23 16-26 17-32 18-33 19-23 20-30 21-31

exact bonds :

1-4 22-35

normalized bonds :

2-3 2-7 3-4 4-5 5-6 6-7 8-9 8-12 9-10 10-11 11-16 12-16 17-18 17-22  
18-19 19-20 20-21 21-22

G1:N,X

G2:X,Ak,H

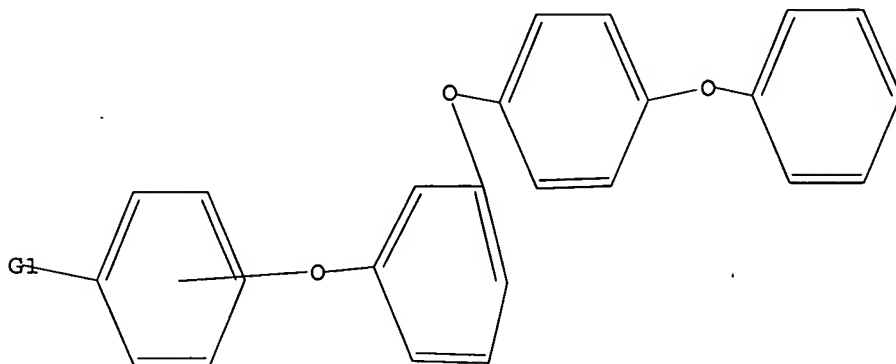
Match level :

1:CLASS 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom  
11:Atom 12:Atom 13:CLASS 14:CLASS 16:CLASS 17:Atom 18:Atom 19:Atom 20:Atom  
21:Atom 22:Atom 23:CLASS 25:CLASS 26:CLASS 28:CLASS 29:CLASS 30:CLASS  
31:CLASS 32:CLASS 33:CLASS 35:CLASS

L35 STRUCTURE UPLOADED

=> d query

L35 STR



G1 N,X

Structure attributes must be viewed using STN Express query preparation.

=> s l35

SAMPLE SEARCH INITIATED 19:48:47 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 1690 TO ITERATE

59.2% PROCESSED 1000 ITERATIONS  
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
SEARCH TIME: 00.00.01

1 ANSWERS

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 31334 TO 36266  
PROJECTED ANSWERS: 1 TO 111

L36 1 SEA SSS SAM L35

=> s l35 full  
FULL SEARCH INITIATED 19:48:53 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 33622 TO ITERATE

100.0% PROCESSED 33622 ITERATIONS  
SEARCH TIME: 00.00.01

9 ANSWERS

L37 9 SEA SSS FUL L35

=> fil caplus  
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
161.33	1775.72

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
0.00	-43.80

CA SUBSCRIBER PRICE

FILE 'CAPLUS' ENTERED AT 19:48:58 ON 12 JAN 2005  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 12 Jan 2005 VOL 142 ISS 3  
FILE LAST UPDATED: 11 Jan 2005 (20050111/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l37

L38 5 L37

=> d l38 1-5 abs ibib hitstr

L38 ANSWER 1 OF 5 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB 1,4-Bis[2'-cyano-3'-(4'-aminophenoxy)phenoxy]-2-([3',5'-bis(trifluoromethyl)phenyl]benzene was polymerized with 4,4'-oxydipthalic anhydride and 6FDA to give polyimides having glass temperature <214° and 5% weight loss temperature in N<sub>2</sub> >443°.s. These polyimides were soluble in N-methylpyrrolidone, dimethylacetamide, and DMF at room temperature. Flexible and transparent thin films could be obtained by solution casting. The cutoff wavelengths of the polymer films were 361 and 341 nm,

resp.  
 ACCESSION NUMBER: 2003:658703 CAPIUS  
 DOCUMENT NUMBER: 140:60052  
 TITLE: Trifluoromethylated polyimides  
 AUTHOR(S): Liu, Baijun; Hu, Wei; Jiang, Zhenhua; Matsumoto, Toshihiko  
 CORPORATE SOURCE: Center for Nano Science and Technology, Tokyo Polytechnic University, Kanagawa, 243-0297, Japan  
 SOURCE: Journal of Photopolymer Science and Technology (2003),

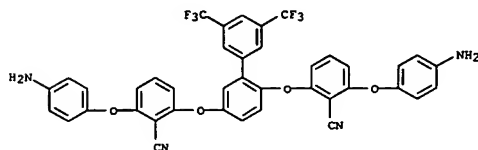
16(2), 261-262  
 CODEN: JSTEFW; ISSN: 0914-9244  
 PUBLISHER: Technical Association of Photopolymers, Japan  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

IT 638168-41-9P 638168-42-0P  
 RL: SPN (Synthetic preparation); PREP (Preparation) (preparation and properties of)

RN 638168-41-9 CAPIUS  
 CN Benzonitrile, 2,2'-[([3',5'-bis(trifluoromethyl)(1,1'-biphenyl)-2,5-diyl]bis(oxy))bis[6-(4-aminophenoxy)-], polymer with 5,5'-oxybis[1,3-isobenzofurandione] (9CI) (CA INDEX NAME)

CH 1

CRN 638168-40-8  
 CMF C40 H24 F6 N4 O4



CH 2

CRN 1823-59-2  
 CMF C16 H6 O7

L38 ANSWER 2 OF 5 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB The poly(amic acid) copolymers are prepared by polymerization of mixts. of diamine compds. which comprise (1) M1 mol of NH<sub>2</sub>C<sub>6</sub>H<sub>4</sub>XC<sub>6</sub>H<sub>4</sub>NC<sub>6</sub>H<sub>4</sub>NH<sub>2</sub> [X = direct bond, O, CO, S, SO<sub>2</sub>, CH<sub>2</sub>, CMe<sub>2</sub>, C(CF<sub>3</sub>)<sub>2</sub>] or their derivs. having F, Cl, Br, I, CN, Me, CF<sub>3</sub>, OMe, Ph, 4-PhC<sub>6</sub>H<sub>4</sub>, PhO, and/or 4-PhC<sub>6</sub>H<sub>4</sub>O, (2) M2 mol of H<sub>2</sub>N(CH<sub>2</sub>)<sub>3</sub>SiMe<sub>2</sub>O(SiMe<sub>2</sub>O)<sub>n</sub>SiMe<sub>2</sub>(CH<sub>2</sub>)<sub>3</sub>NH<sub>2</sub> (1: n = 0-9), and (3) M3 mol of H<sub>2</sub>N(CH<sub>2</sub>)<sub>2</sub>mO(CH<sub>2</sub>CH<sub>2</sub>O)<sub>n</sub>(CH<sub>2</sub>)<sub>2</sub>mNH<sub>2</sub> (m = 1-3; n = 0-3) and/or H<sub>2</sub>N(CH<sub>2</sub>)<sub>n</sub>NH<sub>2</sub> (n = 2-12) satisfying M1: (M<sub>2</sub> + M<sub>3</sub>) = 1: (0.05-1.0) and M<sub>2</sub>/M<sub>3</sub> = (1/20)-(10/1), and anhydrides of aromatic tetracarboxylic acids (the aromatic residue is benzene, naphthalene, di-Ph ether, di-Ph ketone, di-Ph sulfone, diphenylmethane, diphenylpropane, diphenylhexafluoropropane, 1,4-diphenoxybenzene, 4,4'-diphenoxybiphenyl, or 4,4'-diphenoxyisopropylidenediphenyl). Poly(amic acid) and/or polyimide solns., polyimide films, and polyimide powders are also claimed. Thus, 1,3-bis(3-aminophenoxy)benzene 8.1861, 1 (n = 0; BY 16-871) 0.9941, and diethylene glycol bis(3-aminopropyl) ether 1.7625 g were treated with 1.2980 g 3,3',4,4'-biphenyltetracarboxylic acid dianhydride at a room temperature for 20 h to give a poly(amic acid) solution (logarithmic viscosity 0.46 dL/g), which was applied on a glass plate and heated to 100-250° to give a polyimide film showing glass-transition temperature 164° and good adhesion to a Cu foil.

ACCESSION NUMBER: 1999:498286 CAPIUS  
 DOCUMENT NUMBER: 131:158564  
 TITLE: Poly(amic acid) copolymers, polyimide copolymers, and heat-resistant adhesives therefrom  
 INVENTOR(S): Ohkawa, Yuichi; Sakata, Yoshihiro; Okumura, Taomomi; Shibuya, Atsushi; Kuroki, Takashi; Oikawa, Hideaki  
 PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 22 pp.  
 CODEN: JKOXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

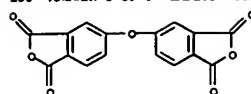
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11217435	A2	19990810	JP 1998-21815	19980203
PRIORITY APPLN. INFO.:			JP 1998-21815	19980203

IT 237057-75-9P  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (poly(amic acids) and polyimides for heat-resistant adhesives)  
 RN 237057-75-9 CAPIUS  
 CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with α-[(3-aminopropyl)dimethylsilyl]-ω-[(3-aminopropyl)dimethylsilyl]oxy]poly[oxy(dimethylsilylene)], 3,3'-[oxybis(2,1-ethenediyl)oxy]bis[1-propanamine] and 3,3'-[1,3-phenylenebis(oxy)]bis[6-([1,1'-biphenyl]-4-yloxy)benzenamine], block (9CI) (CA INDEX NAME)

CH 1

CRN 237057-74-8  
 CMF C42 H32 N2 O4

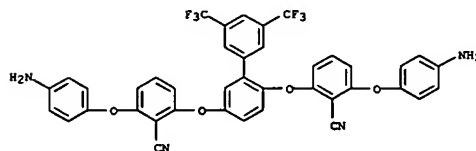
L38 ANSWER 1 OF 5 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)



RN 638168-42-0 CAPIUS  
 CN Benzonitrile, 2,2'-[([3',5'-bis(trifluoromethyl)(1,1'-biphenyl)-2,5-diyl]bis(oxy))bis[6-(4-aminophenoxy)-], polymer with 5,5'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[1,3-isobenzofurandione] (9CI) (CA INDEX NAME)

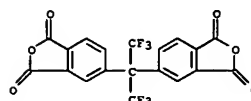
CH 1

CRN 638168-40-8  
 CMF C40 H24 F6 N4 O4



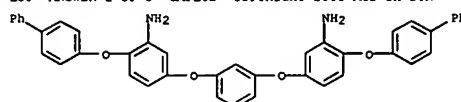
CH 2

CRN 1107-00-2  
 CMF C19 H6 F6 O6



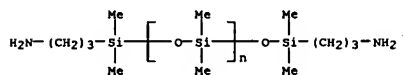
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L38 ANSWER 2 OF 5 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)



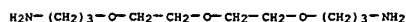
CH 2

CRN 97917-34-5  
 CMF (C2 H6 O Si)n C10 H28 N2 O Si2  
 CCI PMS



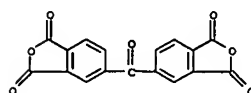
CH 3

CRN 4246-51-9  
 CMF C10 H24 N2 O3



CH 4

CRN 2421-28-5  
 CMF C17 H6 O7





L38 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB The dam-bars binding external terminals for the title lead frames are made of solvent-soluble fluoropolymers or polyimides. The use of the polymer dam-bar materials prevents damages on the external terminals during separation of the frames in the manufacturing  
 ACCESSION NUMBER: 1996:303782 CAPLUS  
 DOCUMENT NUMBER: 124:330329  
 TITLE: Semiconductor device lead frames having polymer dam-bars  
 INVENTOR(S): Igarashi, Kazumasa  
 PATENT ASSIGNEE(S): Nitto Denko Corp, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.  
 CODEN: JKOXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

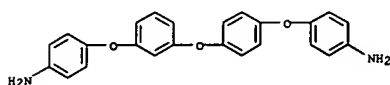
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08046126	A2	19960216	JP 1994-183731	19940804

PRIORITY APPLN. INFO.: JP 1994-183731 19940804

IT 121162-23-0  
 RL: DEV (Device component use); POF (Polymer in formulation); PRP (Properties); USES (Uses)  
 (polymer dam-bars for lead-frames in semiconductor devices)  
 RN 121162-23-0 CAPLUS  
 CN 1,3-Isobenzofurandione, 5,5'-sulfonylbis-, polymer with 4-[3-[4-(4-aminophenoxy)phenoxy]phenoxy]benzenamine (9CI) (CA INDEX NAME)

CH 1

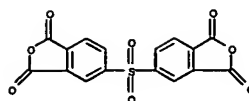
CRN 121162-22-9  
 CMF C24 H20 N2 O3



CH 2

CRN 2540-99-0  
 CMF C16 H6 O8 S

L38 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



L38 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN  
 GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The title photoreceptors comprise a conductive support coated with a photosensitive layer containing a bisazo compound I (K1, K2 = OH-containing coupler residue having a group with coupling ability, 1 of K1 and K2 is II (Y = divalent N-contg heterocycle which may be substituted, divalent aromatic hydrocarbon which may be substituted); X = divalent group having ≥2 groups selected from III and IV; R1, R2 = H, halo, (substituted) alkyl, (substituted) alkoxy, (substituted) aryl; the benzene rings A, B, and C may have substituents). The photoreceptors show high photosensitivity and good durability in repeated use. Thus, an Al vapor-deposited polyester film was coated with a charge-generating layer containing V and with a charge-transferring layer containing a hydrazone compound to give a photoreceptor.

ACCESSION NUMBER: 1995:849478 CAPLUS  
 DOCUMENT NUMBER: 124:215963  
 TITLE: Electrophotographic photoreceptors using novel bisazo compound  
 INVENTOR(S): Rin, Mamoru; Tanaka, Noriko  
 PATENT ASSIGNEE(S): Mitsubishi Kagaku KK, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
 CODEN: JKOXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

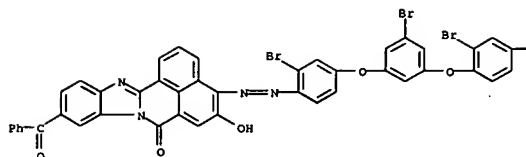
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07168378	A2	19950704	JP 1993-316552	19931216

PRIORITY APPLN. INFO.: JP 1993-316552 19931216

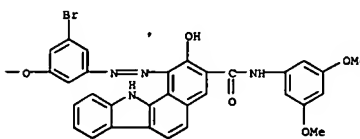
IT 170588-35-9  
 RL: DEV (Device component use); USES (Uses)  
 (electrophotog. photoreceptor containing bisazo compound as charge-generating agent)  
 RN 170588-35-9 CAPLUS  
 CN 11H-Benzo[a]carbazole-3-carboxamide, 1-[[3-[4-[3-[4-[(10-benzoyl-5-hydroxy-7-oxo-7H-benzimidazo[2,1-a]benz[de]isoquinolin-4-yl)azo]-3-bromophenoxy]-5-bromophenoxy]-3-bromophenoxy]-5-bromophenyl]azo]-N-(3,5-dimethoxyphenyl)-2-hydroxy- (9CI) (CA INDEX NAME)

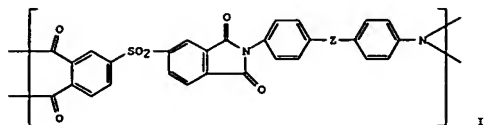
L38 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

PAGE 1-A



PAGE 1-B





AB The title compns. with good heat resistance and elec. and mech. characteristics contain polyimides of repeating unit I (Z = S, SC6H4S, CMe2C6H4CMe2, XC6H4YC6H4X; X = O, S, CR1R2; Y = direct bond, O, S, SO2, CR1R2, CO; R1, R2 = H, halogen, C1-5 haloalkyl) and intrinsic viscosity 0.3-5.0 dL/g, dissolved in organic solvent(s), and prepared by imidation

in an aprotic polar organic solvent and/or phenolic solvent. 4,4'-Bis(p-aminophenoxy)diphenyl sulfone was polymerized with di-Ph sulfone-3,3',4,4'.

tetracarboxylic dianhydride in N-methylpyrrolidone at 25-30° for 1 h then heated at 160° for 5 h to give a polyimide solution. The polyimide had intrinsic viscosity (5 g/100 mL N-methylpyrrolidone, 25°) 0.7., decomposition temperature 565°, softening temperature 285°, tensile strength 12.2 kg/mm2, and modulus 271 kg/mm2.

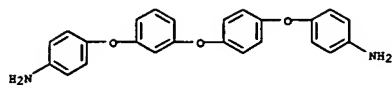
ACCESSION NUMBER: 1989:458573 CAPIUS  
DOCUMENT NUMBER: 111:58573  
TITLE: Soluble polyimide composition and its manufacture  
INVENTOR(S): Ikeda, Tsuyoshi; Sanami, Hiroshi; Nakazawa, Mikiro; Kawashima, Yuji  
PATENT ASSIGNEE(S): New Japan Chemical Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.  
CODEN: JKOCAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 64000121	A2	19890105	JP 1988-31591	19880213
PRIORITY APPLN. INFO.:			JP 1987-32030	A1 19870213

IT 121162-23-0P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(manufacture of, soluble, heat-resistant)  
RN 121162-23-0 CAPIUS  
CN 1,3-Isobenzofurandione, 5,5'-sulfonylbis-, polymer with  
4-[3-[4-(4-aminophenoxy)phenoxy]phenoxy]benzenamine (9CI) (CA INDEX  
NAME)

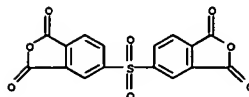
CM 1

CRN 121162-22-9  
CMF C24 H20 N2 O3



CM 2

CRN 2540-99-0  
CMF C16 H6 O8 S



```
=> fil reg
COST IN U.S. DOLLARS          SINCE FILE      TOTAL
                                ENTRY      SESSION
FULL ESTIMATED COST          25.15      1800.87

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)    SINCE FILE      TOTAL
                                                ENTRY      SESSION
CA SUBSCRIBER PRICE                        -3.65      -47.45
```

FILE 'REGISTRY' ENTERED AT 19:49:43 ON 12 JAN 2005  
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
 COPYRIGHT (C) 2005 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file  
 provided by InfoChem.

STRUCTURE FILE UPDATES: 10 JAN 2005 HIGHEST RN 811411-12-8  
 DICTIONARY FILE UPDATES: 10 JAN 2005 HIGHEST RN 811411-12-8

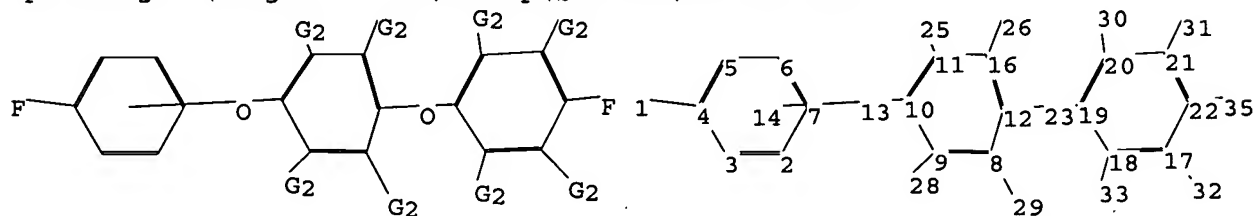
TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when  
 conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more  
 information enter HELP PROP at an arrow prompt in the file or refer  
 to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

```
=>
Uploading C:\Program Files\Stnexp\Queries\10718532.str
```



```
chain nodes :
1 13 23 25 26 28 29 30 31 32 33 35
ring nodes :
2 3 4 5 6 7 8 9 10 11 12 16 17 18 19 20 21 22
chain bonds :
1-4 8-29 9-28 10-13 11-25 12-23 16-26 17-32 18-33 19-23 20-30 21-31
22-35
ring bonds :
2-3 2-7 3-4 4-5 5-6 6-7 8-9 8-12 9-10 10-11 11-16 12-16 17-18 17-22
18-19 19-20 20-21 21-22
exact/norm bonds :
8-29 9-28 10-13 11-25 12-23 16-26 17-32 18-33 19-23 20-30 21-31
exact bonds :
1-4 22-35
```

normalized bonds :

2-3 2-7 3-4 4-5 5-6 6-7 8-9 8-12 9-10 10-11 11-16 12-16 17-18 17-22  
18-19 19-20 20-21 21-22

G1:N,X

G2:X,Ak,H

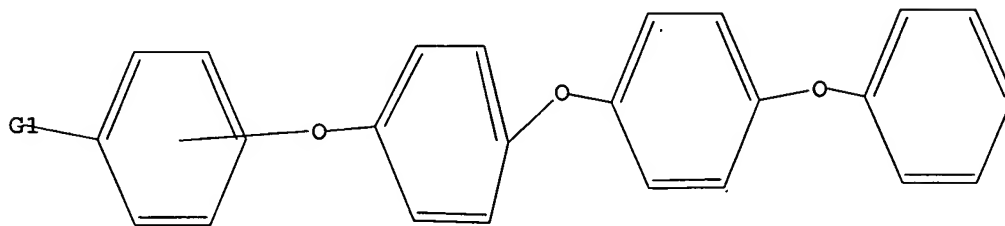
Match level :

1:CLASS 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom  
11:Atom 12:Atom 13:CLASS 14:CLASS 16:CLASS 17:Atom 18:Atom 19:Atom 20:Atom  
21:Atom 22:Atom 23:CLASS 25:CLASS 26:CLASS 28:CLASS 29:CLASS 30:CLASS  
31:CLASS 32:CLASS 33:CLASS 35:CLASS

L39 STRUCTURE UPLOADED

=> d query

L39 STR



G1 N,X

Structure attributes must be viewed using STN Express query preparation.

=> s l39

SAMPLE SEARCH INITIATED 19:50:22 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 3332 TO ITERATE

30.0% PROCESSED 1000 ITERATIONS  
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
SEARCH TIME: 00.00.01

2 ANSWERS

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 63179 TO 70101  
PROJECTED ANSWERS: 2 TO 287

L40 2 SEA SSS SAM L39

=> s l39 full

FULL SEARCH INITIATED 19:50:28 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 66199 TO ITERATE

100.0% PROCESSED 66199 ITERATIONS  
SEARCH TIME: 00.00.01

271 ANSWERS

L41            271 SEA SSS FUL L39

=> fil caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

161.33

1962.20

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

0.00

-47.45

FILE 'CAPLUS' ENTERED AT 19:50:32 ON 12 JAN 2005

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 12 Jan 2005 VOL 142 ISS 3

FILE LAST UPDATED: 11 Jan 2005, (20050111/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l41

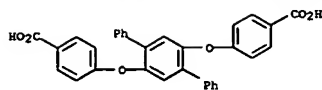
L42            231 L41

=> d l42 abs ibib hitstr

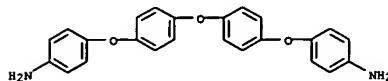
AB A new ether-bridged aromatic dicarboxylic acid, 2',5'-bis(4-carboxyphenoxy)-p-terphenyl (I), was synthesized by the aromatic fluoro-displacement reaction of p-fluorobenzonitrile with 2',5'-dihydroxy-p-terphenyl in the presence of potassium carbonate, followed by alkaline hydrolysis. A set of new aromatic polyamides containing ether and laterally attached p-terphenyl units was synthesized by the direct phosphorylation polycondensation of diacid I with various aromatic diamines. The polymers were produced with high yields and moderately high inherent viscosities (0.44-0.79 dL/g). The polyamides derived from I and rigid diamines, such as p-phenylenediamine and benzidine, and a structurally analogous diamine, 2',5'-bis(4-aminophenoxy)-p-terphenyl, were semicryst. and insol. in organic solvents. The other polyamides were amorphous and organosol. and could afford flexible and tough films via solution casting. These films exhibited good mech. properties, with tensile strengths of 91-108 MPa, elongations to break of 6-17%, and initial moduli of 1.95-2.43 GPa. These polyamides showed glass-transition temps. between 193 and 252 °C. Most of the polymers did not show significant weight loss before 450 °C, as revealed by thermogravimetric anal. in nitrogen or in air.

ACCESSION NUMBER: 2004:663458 CAPIUS  
DOCUMENT NUMBER: 141:332566  
TITLE: Synthesis and properties of novel soluble polyamides having ether linkages and laterally attached p-terphenyl units  
AUTHOR(S): Hsiao, Sheng-Ruei; Chang, Yu-Min  
CORPORATE SOURCE: Department of Chemical Engineering, Tatung University,  
SOURCE: Taipei, Taiwan  
Journal of Polymer Science, Part A: Polymer Chemistry (2004), 42(16), 4056-4062  
CODEN: JPACEC; ISSN: 0887-624X  
PUBLISHER: John Wiley & Sons, Inc.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
IT 769945-88-2P 769945-88-3P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (synthesis and properties of novel soluble polyamides having ether linkages and laterally attached p-terphenyl units)  
RN 769945-88-2 CAPIUS  
CN Benzoic acid, 4,4'-[[1,1':4',1''-terphenyl]-2',5'-diylbis(oxy)]bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1

CRN 769945-73-5  
CMF C32 H22 O6

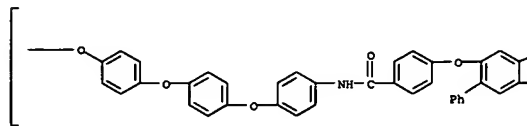
CM 2

CRN 13080-88-1  
CMF C24 H20 N2 O3

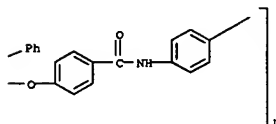
RN 769945-89-3 CAPIUS

CN Poly(oxy-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenyleneiminocarbonyl-1,4-phenyleneoxy[1,1':4',1''-terphenyl]-2',5'-diylbis(oxy)-1,4-phenyleneiminocarbonylimino-1,4-phenylene) (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

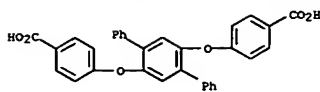
=> d 142 1-231 abs ibib hitstr

AB A new ether-bridged aromatic dicarboxylic acid, 2',5'-bis(4-carboxyphenoxy)-p-terphenyl (I), was synthesized by the aromatic fluoro-displacement reaction of p-fluorobenzonitrile with 2',5'-dihydroxy-p-terphenyl in the presence of potassium carbonate, followed by alkaline hydrolysis. A set of new aromatic polyamides containing ether and laterally attached p-terphenyl units was synthesized by the direct phosphorylation polycondensation of diacid I with various aromatic diamines. The polymers were produced with high yields and moderately high inherent viscosities (0.44-0.79 dL/g). The polyamides derived from I and rigid diamines, such as p-phenylenediamine and benzidine, and a structurally analogous diamine, 2',5'-bis(4-aminophenoxy)-p-terphenyl, were semicryst. and insol. in organic solvents. The other polyamides were amorphous and organosol. and could afford flexible and tough films via solution casting. These films exhibited good mech. properties, with tensile strengths of 91-108 MPa, elongations to break of 6-17%, and initial moduli of 1.95-2.43 GPa. These polyamides showed glass-transition temps. between 193 and 252 °C. Most of the polymers did not show significant weight loss before 450 °C, as revealed by thermogravimetric anal. in nitrogen or in air.

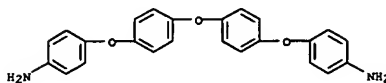
ACCESSION NUMBER: 2004:663458 CAPLUS  
DOCUMENT NUMBER: 141:332566  
TITLE: Synthesis and properties of novel soluble polyamides having ether linkages and laterally attached p-terphenyl units  
AUTHOR(S): Hsiao, Sheng-Huei; Chang, Yu-Min  
CORPORATE SOURCE: Department of Chemical Engineering, Tatung University,  
SOURCE: Taipei, Taiwan  
Journal of Polymer Science, Part A: Polymer Chemistry (2004), 42(16), 4056-4062  
CODEN: JPACCE; ISSN: 0887-624X  
PUBLISHER: John Wiley & Sons, Inc.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
IT 769945-88-2P 769945-89-3P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (synthesis and properties of novel soluble polyamides having ether linkages and laterally attached p-terphenyl units)  
RN 769945-88-2 CAPLUS  
CN Benzoic acid, 4,4'-[1,1':4',1''-terphenyl]-2',5'-diylbis(oxy)bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 769945-73-5  
CMF C32 H22 O6

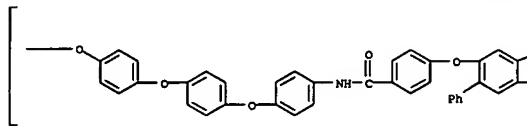
CM 2

CRN 13080-88-1  
CMF C24 H20 N2 O3

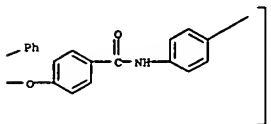
RN 769945-89-3 CAPLUS

CN Poly(oxo-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenyleneimino)carboxyl-1,4-phenyleneoxy(1,1':4',1''-terphenyl)-2',5'-diylbis(oxy)-1,4-phenyleneimino-1,4-phenylene (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

AB The title circuit boards are thermal-resistant insulative films which are laminated with a thermal resistant polymer layer and a conductive metal layer successively. The thermal-resistant insulative film are made of aromatic tetracarboxylic acid-diamine copolymer. polyimide. The conductive metal layer is made by plating. The materials give the circuit boards durability in increased adhesion of a plated film on the insulative film substrates in initial and cyclic heated and humid conditions.

ACCESSION NUMBER: 2004:530431 CAPLUS  
DOCUMENT NUMBER: 141:97776  
TITLE: Substrates for conductor plating and plated printed circuit boards  
INVENTOR(S): Watanabe, Takuo; Matsumura, Nobuo  
PATENT ASSIGNEE(S): Toray Industries, Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 25 pp.  
CODEN: JKKKAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JF 2004186166	A2	20040702	JF 2002-347518	20021129
PRIORITY APPL. INFO.:			JF 2002-347518	20021129

IT 58883-56-0, 3,3',4,4'-Benzophenonetetracarboxylic dianhydride-bis(3-aminophenoxydiphenyl)ether copolymer 181709-21-7, Pyromellitic acid dianhydride-bis(3-aminophenoxydiphenyl)ether copolymer 714282-75-4, 3,3',4,4'-Biphenyltetracarboxylic

dianhydride-1,3-bis(3-aminopropyl)tetramethyldisiloxane-p-phenylenediamine-bis(3-aminophenoxydiphenyl)ether copolymer 714282-76-5, 3,3',4,4'-Biphenyltetracarboxylic dianhydride-3,3',4,4'-benzophenonetetracarboxylic dianhydride-1,3-bis(3-aminopropyl)tetramethyldisiloxane-p-phenylenediamine-bis(3-aminophenoxydiphenyl)ether copolymer 714282-79-8, 3,3',4,4'-Biphenyltetracarboxylic dianhydride-Pyromellitic acid dianhydride-(3-Aminopropyl)-terminated dimethylsiloxane-bis(3-aminophenoxydiphenyl)ether-p-phenylenediamine copolymer 714282-80-1, 3,3',4,4'-Biphenyltetracarboxylic dianhydride-(3-Aminopropyl)-terminated dimethylsiloxane-p-phenylenediamine-bis(3-aminophenoxydiphenyl)ether copolymer 714282-83-4, 3,3',4,4'-Biphenyltetracarboxylic dianhydride-1,3-bis(3-aminopropyl)tetramethyldisiloxane-bis(3-aminophenoxydiphenyl)ether copolymer

RL: PRP (Properties)  
(polyimide insulator, plating adhesion for; polyamide-laminated substrates for conductor plating and plated printed circuit boards)

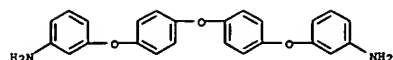
RN 58883-56-0 CAPLUS

CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with 3,3'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

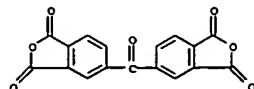
CM 1

CRN 58883-55-9  
CMF C24 H20 N2 O3



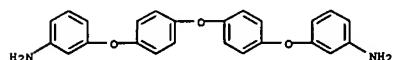


CM 2

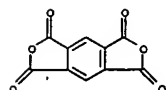
CRN 2421-28-5  
CMF C17 H6 O7

RN 181709-21-7 CAPIUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 3,3'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1

CRN 58883-55-9  
CMF C24 H20 N2 O3

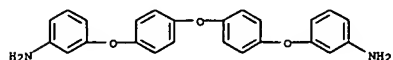
CM 2

CRN 89-32-7  
CMF C10 H2 O6

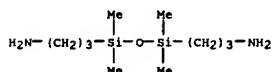
RN 714282-75-4 CAPIUS  
CN [5,5'-Biisobenzofuran]-1,1',3,3'-tetrone, polymer with 1,4-benzenediamine, 3,3'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanedyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

L42 ANSWER 2 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)  
5,5'-carbonylbis[1,3-isobenzofurandione], 3,3'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanedyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

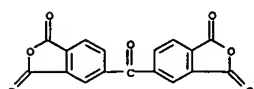
CM 1

CRN 58883-55-9  
CMF C24 H20 N2 O3

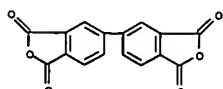
CM 2

CRN 2469-55-8  
CMF C10 H28 N2 O Si2

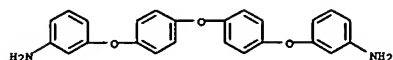
CM 3

CRN 2421-28-5  
CMF C17 H6 O7

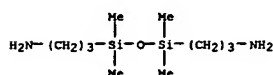
CM 4

CRN 2420-87-3  
CMF C16 H6 O6

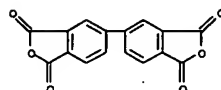
CM 1

CRN 58883-55-9  
CMF C24 H20 N2 O3

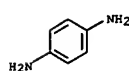
CM 2

CRN 2469-55-8  
CMF C10 H28 N2 O Si2

CM 3

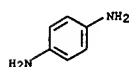
CRN 2420-87-3  
CMF C16 H6 O6

CM 4

CRN 106-50-3  
CMF C6 H8 N2

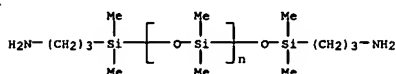
RN 714282-76-5 CAPIUS  
CN [5,5'-Biisobenzofuran]-1,1',3,3'-tetrone, polymer with 1,4-benzenediamine,

CM 5

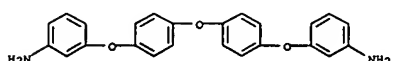
CRN 106-50-3  
CMF C6 H8 N2

RN 714282-79-8 CAPIUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with α-[(3-aminopropyl)dimethylsilyl]oxy-poly[oxy(dimethylsilylene)], 1,4-benzenediamine, [5,5'-biisobenzofuran]-1,1',3,3'-tetrone and 3,3'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine), block (9CI) (CA INDEX NAME)

CM 1

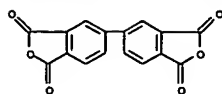
CRN 97917-34-5  
CMF [C2 H6 O Si]n C10 H28 N2 O Si2  
CCI PMS

CM 2

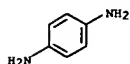
CRN 58883-55-9  
CMF C24 H20 N2 O3

CM 3

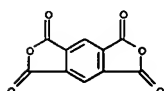
CRN 2420-87-3  
CMF C16 H6 O6



CM 4

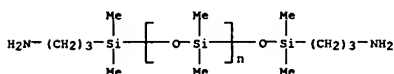
CRN 106-50-3  
CMF C6 H8 N2

CM 5

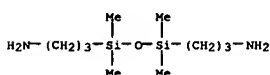
CRN 89-32-7  
CMF C10 H2 O6

RN 714282-80-1 CAPLUS  
CM [5,5'-Bis(benzofuran)-1,1',3,3'-tetrone, polymer with  
α-[(3-aminopropyl)dimethylsilyl]-ω-[[[(3-aminopropyl)dimethylsilyl]oxy]poly(oxydimethylsilylene)],  
1,4-benzenediamine and 3,3'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine],  
block (9CI) (CA INDEX NAME)

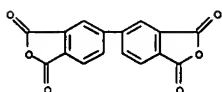
CM 1

CRN 97917-34-5  
CMF [C2 H6 O Si]n C10 H28 N2 O Si2  
CCI PMS

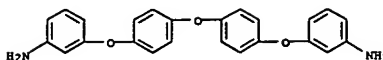
CM 2

CRN 2469-55-8  
CMF C10 H28 N2 O Si2

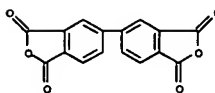
CM 3

CRN 2420-87-3  
CMF C16 H6 O6

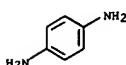
CM 2

CRN 58883-55-9  
CMF C24 H20 N2 O3

CM 3

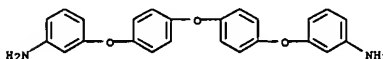
CRN 2420-87-3  
CMF C16 H6 O6

CM 4

CRN 106-50-3  
CMF C6 H8 N2

RN 714282-83-4 CAPLUS  
CM [5,5'-Bis(benzofuran)-1,1',3,3'-tetrone, polymer with  
3,3'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] and 3,3'-[1,1,3,3-tetramethyl-1,3-disiloxanedyl]bis[1-propanamine] (9CI) (CA INDEX NAME)

CM 1

CRN 58883-55-9  
CMF C24 H20 N2 O3

AB The influence of electron beam irradiation on the properties of fluorine-containing poly(aryl ether ketone)s (F-PEK), derived from 2,3,4,5,6-pentafluorobenzoic acid, was examined. Irradiation was performed with an electron beam at a dose of  $3.63 \pm 103$  Gy a-1 for which the corresponding doses were 29.0, 51.0, and 94.5 MGy. Tensile strength at break increased up to a dose of 29.0 MGy and then decreased very slightly with irradiation. Elongation at break was more susceptible to irradiation and decreased drastically to one tenth at a dose of 29.0 MGy. Young's modulus was enhanced by the irradiation. F-PEKs were changed from elastic materials to strong and brittle materials by irradiation. Relaxation of the viscoelastic property shifted toward higher temperature by irradiation. These tensile and viscoelastic property changes were attributed to the formation of a bulkier and more rigid structure by crosslinking. The fluorine atoms attached to the 1,4-phenylene moiety in F-PEKs were surprisingly susceptible to the irradiation and were completely lost at a dose of 29.0 MGy.

The  $\pi$ -electron conjugated aromatic structure was concurrently developed during irradiation. Further, polar functional groups such as carboxyl group and ester group were generated by chain scission and rearrangement. The F-PEKs retained their good transparency and the thermal stability was significantly improved after irradiation.

ACCESSION NUMBER: 2004:299114 CAPLUS

DOCUMENT NUMBER: 141:7770

TITLE: Influence of electron beam irradiation on properties

of fluorine-containing poly(aryl ether ketone)s

AUTHOR(S): Kimura, Kunio; Tabuchi, Yumi; Nishichi, Ai;

Yamashita, Yuhiko; Okumura, Yasunori; Omote, Kazushi; Morita, Yosuke; Kudo, Hisaaki

CORPORATE SOURCE: Faculty of Environmental Science and Technology,

Okayama University, Okayama, 700-8530, Japan

SOURCE: Journal of Applied Polymer Science (2004), 91(1),

157-166

CODEN: JAPNAB; ISSN: 0021-8995

PUBLISHER: John Wiley &amp; Sons, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

IT 696586-70-6

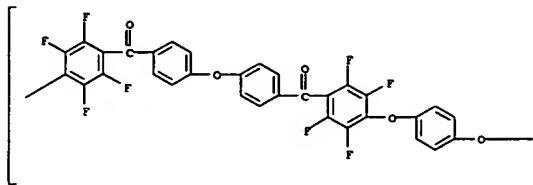
RL: PRP (Properties)

(influence of EB irradiation on mech., thermal, and viscoelasticity properties of fluorine-containing poly(aryl ether ketone)s)

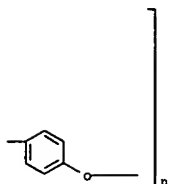
RN 696586-70-6 CAPLUS

CM Poly[oxy-1,4-phenyleneoxy-1,4-phenyleneoxy(2,3,5,6-tetrafluoro-1,4-phenylene)carbonyl-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



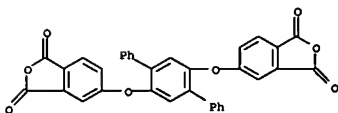
REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L42 ANSWER 4 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN

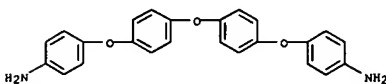
AB A novel bis(ether anhydride) monomer, 2',5'-bis(3,4-dicarboxyphenoxy)-p-terphenyl dianhydride, was synthesized from the nitro displacement of 4-nitrophthalonitrile by the phenoxide ion of 2',5'-dihydroxy-p-terphenyl, followed by alkaline hydrolysis of the intermediate bis(ether dinitrile) and cyclodehydration of the resulting bis(ether diacid). A series of new poly(ether imide)s bearing laterally attached p-terphenyl groups were prepared from the bis(ether anhydride) with various aromatic diamines via a conventional two-stage process that included ring-opening polyaddn. to form the poly(amic acid)s followed by thermal or chemical imidization to the poly(ether imide)s. The inherent viscosities of the poly(amic acid) precursors were in the range of 0.62-1.26 dL/g. Most of the poly(ether imide)s obtained from both routes were soluble in polar organic solvents, such as N,N-dimethylacetamide. All the poly(ether imide)s could afford transparent, flexible, and strong films with high tensile strengths. The glass transition temps. of these poly(ether imide)s were recorded as between 214° and 276° by DSC. The softening temps. of all the poly(ether imide) films stayed in the 207°-265° range according to thermomech. anal. For all the polymers significant decomposition did not occur below 500° in a nitrogen or air atmospheric

ACCESSION NUMBER: 2004:99199 CAPLUS  
DOCUMENT NUMBER: 140:304163  
TITLE: Synthesis and characterization of soluble polyimides derived from 2',5'-bis(3,4-dicarboxyphenoxy)-p-terphenyl dianhydride  
AUTHOR(S): Hsiao, Sheng-Huei; Chung, Cheng-Lin; Lee, Mei-Ling  
CORPORATE SOURCE: Department of Chemical Engineering, Tatung University,  
SOURCE: Taipei, Taiwan  
Journal of Polymer Science, Part A: Polymer Chemistry (2004), 42(4), 1008-1017  
CODEN: JPACEC; ISSN: 0887-624X  
PUBLISHER: John Wiley & Sons, Inc.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
IT 676372-59-1P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (synthesis and characterization of soluble polyimides derived from 2',5'-bis(3,4-dicarboxyphenoxy)-p-terphenyl dianhydride)  
RN 676372-59-1 CAPLUS  
CN 1,3-isobenzofurandione, 5,5'-[1,1':4',1''-terphenyl]-2',5'-diylbis(oxy)bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)  
CM 1  
CRN 676372-42-2  
CMF C34 H18 O8

L42 ANSWER 4 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



CM 2  
CRN 13080-88-1  
CMF C24 H20 N2 O3



REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L42 ANSWER 5 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN

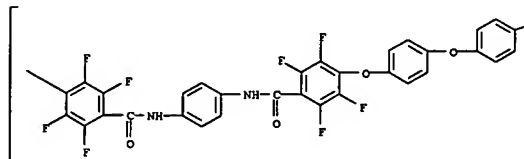
AB The polymers useful for super engineering plastics, are manufactured from compds. having ring-fluorinated phenylcarbamoyl groups such as 1,4-bis(2,3,4,5,6-pentafluorobenzoylamino)benzene (I) and diol compds. in the presence of basic catalysts. Thus, condensing p-phenylenediamine with pentafuorobenzonitrile and polymerizing the resulting product I with 2,2-bis(4-hydroxyphenyl)hexafluoropropane in the presence of K carbonate gave a title polymer.

ACCESSION NUMBER: 2003:902403 CAPLUS  
DOCUMENT NUMBER: 139:381919  
TITLE: Fluoroarylamido-ether polymers with good resistance to heat and moisture and method for manufacture  
INVENTOR(S): Kimura, Kunio; Yamashita, Yoshihiko  
PATENT ASSIGNEE(S): Nippon Shokubai Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.  
CODEN: JPOKAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003327690	A2	20031119	JP 2002-134673	20020509
PRIORITY APPLM. INFO.: JP 2002-134673 20020509				

IT 623711-92-2P  
RL: IMF (Industrial manufacture); PREP (Preparation) (fluoroarylamido-ether polymers with good resistance to heat and moisture and method for manufacture)  
RN 623711-92-2 CAPLUS  
CN Poly[oxy-1,4-phenyleneoxy-1,4-phenyleneoxy(2,3,5,6-tetrafluoro-1,4-phenylene)carbonylimino-1,4-phenyleneimino]carbonyl(2,3,5,6-tetrafluoro-1,4-phenylene) (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



AB The title substrates are prepared by laminating a thermal-resistant polymer

layer and a conductive metal layer successively laminated on a thermal-resistant insulative film, wherein (1) the thermal-resistant polymer layer comprises a polymer containing microparticles with its sp. surface area 40 m<sup>2</sup>/g. The thermal-resistant polymer layer comprises a polyimide containing microparticles with its sp. surface area 40 m<sup>2</sup>/g.

The conductive metal layer is provided by plating of Cu-containing metal.

The arrangement gives the substrates high adhesion and low bending after annealing.

ACCESSION NUMBER: 2003:872678 CAPLUS  
DOCUMENT NUMBER: 139:356820  
TITLE: Substrates and printed circuit boards  
INVENTOR(S): Watanabe, Takuo; Matsumura, Nobuo  
PATENT ASSIGNEE(S): Toray Industries, Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.  
CODEN: JY00GAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

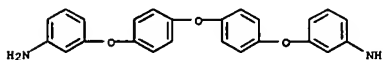
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003118500	A2	20031107	JP 2002-117228	20020419
PRIORITY APPLN. INFO.:			JP 2002-117228	20020419

IT 58883-56-0, Bis(3-aminophenoxyphenyl) ether-3,3',4,4'-benzophenonetetracarboxylic dianhydride copolymer  
RL: DEV (Device component use); PRP (Properties); USES (Uses)  
(laminated substrates and printed circuit boards)

RN 58883-56-0 CAPLUS  
CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with 3,3'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

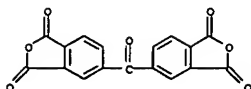
CH 1

CRN 58883-55-9  
CHF C24 H20 N2 O3



CH 2

CRN 2421-28-5  
CHF C17 H6 O7

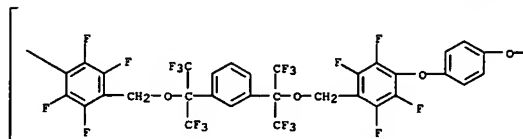


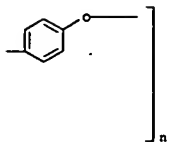
AB A highly fluorinated monomer, 1,3-bis(1,1,1,3,3,3-hexafluoro-2-pentafluorophenylmethoxy-2-propyl)benzene (12F-FBE), is obtained by reaction of the sodium salt of 1,3-bis(1,1,1,3,3,3-hexafluoro-2-hydroxy-2-propyl)benzene with pentafluorobenzyl bromide. 12F-FBE reacts with diphenols to give soluble, hydrophobic, low dielec. (2.30-2.43 at 10 GHz) polyethers. Thermal stability as measured by TGA (10 wt% loss) is moderate and ranges from 445 to 464 °C in air. Glass transition temps. are between 89 and 110 °C.

ACCESSION NUMBER: 2003:728531 CAPLUS  
DOCUMENT NUMBER: 139:396252  
TITLE: Synthesis and characterization of new fluorine-containing polyethers  
AUTHOR(S): Fitch, John W.; Bucio, Emilio; Martinez, Lymari; Macossay, Javier; Venumbaka, Sreenu R.; Dean, Norman; Stoakley, Diane; Cassidy, Patrick E.  
CORPORATE SOURCE: Institute for Environmental and Industrial Science, Shell Center for Polymer Science and Technology, Southwest Texas State University, San Marcos, TX, 78666, USA  
SOURCE: Polymer (2003), 44(21), 6431-6434  
CODEN: POLMAG; ISSN: 0032-3861  
PUBLISHER: Elsevier Science Ltd.  
DOCUMENT TYPE: Journal  
LANGUAGE: English

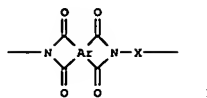
IT 627080-08-4P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(synthesis and characterization of new fluorine-containing polyethers)  
RN 627080-08-4 CAPLUS  
CN Poly[oxy-1,4-phenyleneoxy-1,4-phenyleneoxy(2,3,5,6-tetrafluoro-1,4-phenylene)methyleneoxy(2,2,2-trifluoro-1-(trifluoromethyl)ethylidene)-1,3-phenylene(2,2,2-trifluoro-1-(trifluoromethyl)ethylidene)oxymethylene(2,3,5,6-tetrafluoro-1,4-phenylene)] (9CI) (CA INDEX NAME)

PAGE 1-A





REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

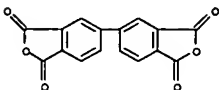


AB Titled membrane with good vapor separation efficiency and water-resistance is obtained by polymer with polyimide framework containing ammonium sulfonate, metal sulfonate, and sulfonic acid groups, and the polyimide has repeating unit represented by I, in which Ar is residue of aromatic tetracarboxylic acid, >50 mol% of X is residues of ammonium sulfonate, metal sulfonate, or sulfonic acid-containing aromatic diamines. Thus, 3,3',4,4'-Biphenyl tetracarboxylic acid anhydride and 2,2'-bis[4-(4-aminophenoxy)phenyl-3-sulfonate] propanetriethylammonium were polymerized in 4-chlorophenol to obtain triethylammonium sulfonate-containing polyimide, which was used to make asym. hollow fiber membrane; the ammonium sulfonate groups in the membrane can be changed to sulfonic acid group after being heat treated with HCl, and a sulfonic acid group-containing hollow fiber membrane with selective gas permeability was obtained.

ACCESSION NUMBER: 2003:210175 CAPIUS  
DOCUMENT NUMBER: 138:222714  
TITLE: Aromatic polyimide permselective asymmetric hollow-fiber membranes  
INVENTOR(S): Kusunoki, Yoshihiro  
PATENT ASSIGNEE(S): Ube Industries, Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
CODEN: JKOXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:  
PATENT NO. KIND DATE APPLICATION NO. DATE  
JP 2003080043 A2 20030318 JP 2001-271422 20010907  
PRIORITY APPLN. INFO.: JP 2001-271422 20010907

IT 500693-20-9DP, reaction products with HCl 500693-20-9P  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(aromatic polyimide permselective asym. hollow-fiber membranes)  
RN 500693-20-9 CAPIUS  
CH Benzenesulfonic acid, 3,3'-oxybis[6-(4-aminophenoxy)-], compd. with N,N-diethylethanamine (1:2), polymer with [5,5'-bisisobenzofuran]-1,1',3,3'-

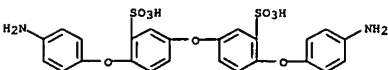
CM 1

CRN 2420-87-3  
CMF C16 H6 O6

CM 2

CRN 500693-19-6  
CMF C24 H20 N2 O9 S2 . 2 C6 H15 N

CM 3

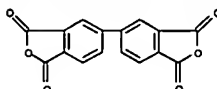
CRN 500693-18-5  
CMF C24 H20 N2 O9 S2

CM 4

CRN 121-44-8  
CMF C6 H15 N

RN 500693-20-9 CAPIUS  
CH Benzenesulfonic acid, 3,3'-oxybis[6-(4-aminophenoxy)-], compd. with N,N-diethylethanamine (1:2), polymer with [5,5'-bisisobenzofuran]-1,1',3,3'-tetrone (9CI) (CA INDEX NAME)

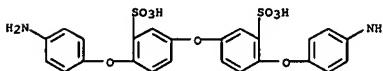
CM 1

CRN 2420-87-3  
CMF C16 H6 O6

CM 2

CRN 500693-19-6  
CMF C24 H20 N2 O9 S2 . 2 C6 H15 N

CM 3

CRN 500693-18-5  
CMF C24 H20 N2 O9 S2

CM 4

CRN 121-44-8  
CMF C6 H15 N

L42 ANSWER 9 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN

AB Two series of novel fluorinated aromatic polyamides were prepared from 1,1-bis[4-(4-carboxyphenoxy)phenyl]-1-phenyl-2,2,2-trifluoro ethane with various aromatic diamines or from 1,1-bis[4-(4-aminophenoxy)phenyl]-1-phenyl-2,2,2-trifluoro ethane with various aromatic dicarboxylic acids with the phosphorylation polyamidation technique. These polyamides had inherent viscosities ranging from 0.51 to 1.54 dL/g that corresponded to weight-average and number-average mol. wts. (by gel permeation chromatog.) of 36,200-80,000 and 17,200-64,300, resp. All polymers were highly soluble in aprotic polar solvents, such as N-methyl-2-pyrrolidone and N,N-dimethylacetamide, and some could even be dissolved in less-polar solvents like THF. The flexible and tough films cast from the polymer solns. possessed tensile strengths of 76-94 MPa and initial moduli of 1.70-2.22 GPa. Glass transition temps. (Tg's) and softening temps. of these polyamides were observed in the range of 185-268°C by differential scanning calorimetry or thermomech. anal. Decomposition temps. (Td's) for 10% weight loss all occurred above 500°C in both nitrogen and air atmospheres. Almost all the fluorinated polyamides displayed relatively higher Tg and Td values than the corresponding non-fluorinated analogs.

ACCESSION NUMBER: 2003:54693 CAPIUS  
DOCUMENT NUMBER: 138:272045  
TITLE: Syntheses and properties of novel fluorinated polyamides based on a bis(ether-carboxylic acid) or a bis(ether amine) extended from bis(4-hydroxyphenyl)phenyl-2,2,2-trifluoro ethane

AUTHOR(S): Hsiao, Sheng-Huei; Chen, Wei-Tsun  
CORPORATE SOURCE: Department of Chemical Engineering, Tatung University,  
SOURCE: Taipei, 104, Taiwan  
Journal of Polymer Science, Part A: Polymer Chemistry (2003), 41(3), 420-431  
CODEN: JPACEC; ISSN: 0887-624X  
PUBLISHER: John Wiley & Sons, Inc.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
IT 503622-53-5P 503622-54-6P

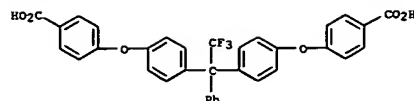
AL: FRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(fluorinated polyamides based on bis ether carboxylic acid or bis amine)

RN 503622-53-5 CAPIUS  
CN Benzoic acid, 4,4'-[(2,2,2-trifluoro-1-phenylethylidene)bis(4,1-phenyleneoxy)]bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

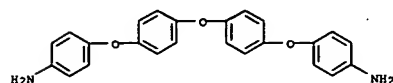
CRN 506437-69-0  
CMF C34 H23 F3 O6

L42 ANSWER 9 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)



CM 2

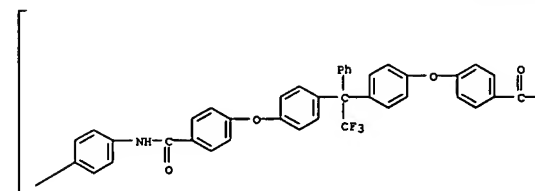
CRN 13080-89-1  
CMF C24 H20 N2 O3



RN 503622-54-6 CAPIUS  
CN

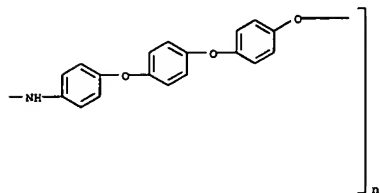
Poly[oxy-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenyleneiminocarbonyl-1,4-phenyleneoxy-1,4-phenylene (2,2,2-trifluoro-1-phenylethylidene)-1,4-phenyleneoxy-1,4-phenylenecarbonylimino-1,4-phenylene] (9CI) (CA INDEX NAME)

PAGE 1-A



L42 ANSWER 9 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)

PAGE 1-B



REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT

L42 ANSWER 10 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
AB A new triphenylamine-containing aromatic dicarboxylic acid, N,N'-bis(4-carboxyphenyl)-N,N'-diphenyl-1,4-phenylenediamine, was synthesized by the condensation of N,N'-diphenyl-1,4-phenylenediamine with 4-fluorobenzonitrile, followed by the alkaline hydrolysis of the intermediate dinitrile compound. A series of novel triphenylamine-based aromatic poly(amine amide)s with inherent viscosities of 0.50-1.02 dL/g were prepared from the diacid and various aromatic diamines by direct phosphorylation polycondensation. All the poly(amine amide)s were amorphous in nature, as evidenced by X-ray diffractograms. Most of the poly(amine amide)s were quite soluble in a variety of organic solvents and could be solution-cast into transparent, tough, and flexible films with good mech. properties. They had useful levels of thermal stability associated with glass transition temps. up to 280°C, 10% weight-loss temps. in excess of 575°C, and char yields at 800°C in nitrogen higher than 60%.

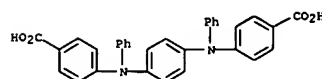
ACCESSION NUMBER: 2003:3796 CAPIUS  
DOCUMENT NUMBER: 138:221931  
TITLE: Synthesis and properties of new soluble triphenylamine-based aromatic poly(amine amide)s derived from N,N'-bis(4-carboxyphenyl)-N,N'-diphenyl-1,4-phenylenediamine  
AUTHOR(S): Liou, Guey-Sheng; Hsiao, Sheng-Huei  
CORPORATE SOURCE: Department of Applied Chemistry, National Chi Nan University, Nantou Hsien, 545, Taiwan  
SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (2002), Volume Date 2003, 41(1), 94-105  
CODEN: JPACEC; ISSN: 0887-624X  
PUBLISHER: John Wiley & Sons, Inc.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
IT 501131-46-0P 501131-47-1P

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)  
(synthesis and properties of new soluble triphenylamine-based aromatic poly(amine amide)s derived from N,N'-bis(4-carboxyphenyl)-N,N'-diphenyl-1,4-phenylenediamine)

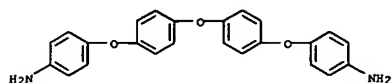
RN 501131-46-0 CAPIUS  
CN Benzoic acid, 4,4'-[1,4-phenylenebis(phenylimino)]bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 501131-33-5  
CMF C32 H24 N2 O4

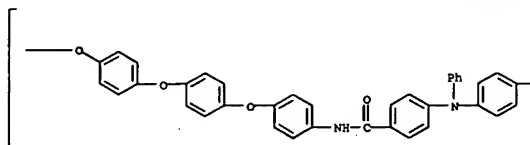


CM 2

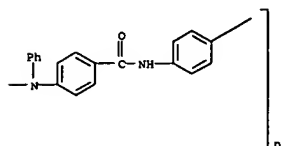
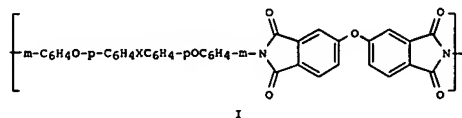
CRN 13080-88-1  
CMF C24 H20 N2 O3RN 501131-47-1 CAPIUS  
CM

Poly[oxy-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenyleneiminocarbonyl-1,4-phenylene(phenylimino)-1,4-phenylene(phenylimino)-1,4-phenyleneiminocarbonylimino-1,4-phenylene] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

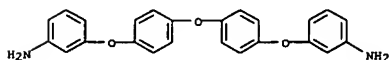
REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMATAB The film is made from a polyimide having repeating units of I [X = O, SO<sub>2</sub>, CMe<sub>2</sub>, C(CF<sub>3</sub>)<sub>2</sub>]. Thus, a film was made by polymerization of 4,4'-bis(3-aminophenoxy)biphenyl and bis(3,4-dicarboxyphenyl)ether dianhydride to form a polyamic acid and casting to form polyimide film.ACCESSION NUMBER: 2002:573458 CAPIUS  
DOCUMENT NUMBER: 137:141453  
TITLE: Polyimide transparent conductive film for solid or liquid crystal display  
INVENTOR(S): Okawa, Yuichi; Sakata, Yoshihiro  
PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.  
CODEN: JTOXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002216542	A2	20020802	JP 2001-12586	20010122

PRIORITY APPLN. INFO.: JP 2001-12586 20010122

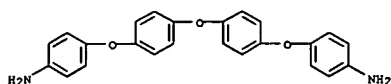
IT 181709-10-4DP, aniline-terminated 181709-10-4P  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyimide transparent conductive film for solid or liquid crystal display)RN 181709-10-4 CAPIUS  
CM 1,3-Isobenzofurandione, 5,5'-oxybis-, polymer with 3,3'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

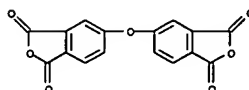
CRN 58883-55-9  
CMF C24 H20 N2 O3L42 ANSWER 11 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
AB The liquid crystal display contains a diamine structure in the orientation film to capture ionic impurities. A liquid crystal used in the LCD has a difluorobenzene, dicyanobenzene, and/or monocyano cyclohexane structure.  
ACCESSION NUMBER: 2002:689899 CAPIUS  
DOCUMENT NUMBER: 137:224248  
TITLE: Liquid crystal display containing diamine structure in orientation film for capturing ionic impuritiesINVENTOR(S): Noboru  
PATENT ASSIGNEE(S): Hitachi Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
CODEN: JTOXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002258287	A2	20020911	JP 2001-61571	20010306
US 2002127354	A1	20020912	US 2002-91215	20020305
CN 1374547	A	20021016	CN 2002-106849	20020306

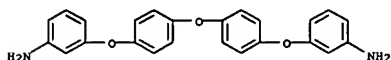
PRIORITY APPLN. INFO.: JP 2001-61571 A 20010306

IT 13080-88-1  
RL: TEM (Technical or engineered material use); USES (Uses)  
(liquid crystal display containing diamine structure in orientation film for capturing ionic impurities)  
RN 13080-88-1 CAPIUS  
CM Benzenamine, 4,4'-[oxybis(4,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)

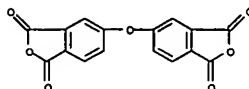
CM 2

CRN 1823-59-2  
CMF C16 H6 O7RN 181709-10-4 CAPIUS  
CM 1,3-Isobenzofurandione, 5,5'-oxybis-, polymer with 3,3'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

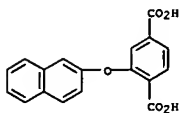
CRN 58883-55-9  
CMF C24 H20 N2 O3

CM 2

CRN 1823-59-2  
CMF C16 H6 O7

L42 ANSWER 13 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB A series of new aromatic polyamides having pendent naphthoxy groups were synthesized by the tri-Ph phosphite-activated polycondensation of (2-naphthoxy)terephthalic acid (NOTPA) with various aromatic diamines in a medium consisting of N-methyl-2-pyrrolidone (NMP), pyridine, and calcium chloride. The diacid monomer NOTPA was prepared from the nitro displacement of di-Me 2-nitroterephthalate with the potassium naphthoxide of  $\beta$ -naphthol, followed by base-induced ester hydrolysis. All the resulting polymers were noncryst. and readily soluble in aprotic polar solvents such as NMP and N,N-dimethylacetamide. Almost all the polymers could be solution-cast to tough, creasable amorphous films with good mech. properties, the values of tensile strengths ranging from 90 to 124 MPa with initial moduli ranging from 1.72 to 2.51 GPa. Except for two examples, all the other polyamides displayed discernible glass transitions between 189° and 248° in the differential scanning calorimetric traces. These polyamides showed insignificant decomposition below 400° in nitrogen or air.

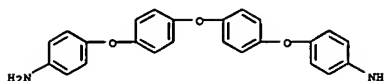
ACCESSION NUMBER: 2002:386400 CAPLUS  
 DOCUMENT NUMBER: 137:125474  
 TITLE: Polyterephthalamides with naphthoxy-pendent groups  
 AUTHOR(S): Liou, Guey-Sheng; Hsiao, Sheng-Huei  
 CORPORATE SOURCE: Department of Applied Chemistry, National Chi Nan University, Nantou, 545, Taiwan  
 SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (2002), 40(11), 1781-1789  
 CODEN: JPACEC; ISSN: 0887-624X  
 PUBLISHER: John Wiley & Sons, Inc.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 444166-67-0P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (synthesis and characterization of aromatic polyamides containing pendent naphthoxy groups)  
 RN 444166-67-0 CAPLUS  
 CN 1,4-Benzenedicarboxylic acid, 2-(2-naphthalenyloxy)-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 116108-57-7  
 CMF C18 H12 O5



L42 ANSWER 14 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB A novel bis(ether anhydride) monomer, 3,6-bis(3,4-dicarboxyphenoxy)benzonorbornane dianhydride, was synthesized from the nitro displacement of 4-nitrophthalonitrile with 3,6-dihydroxybenzonorbornane in the presence of potassium carbonate, followed by the alkaline hydrolysis of the intermediate bis(ether dinitrile) and the cyclodehydration of the resulting bis(ether diacid). A series of poly(ether imide)s bearing pendant norbornane groups were prepared from the bis(ether anhydride) with various aromatic diamines via a conventional two-stage process that included ring-opening polyaddn. to form the poly(amic acid)s followed by thermal imidization to the poly(ether imide)s. The inherent viscosities of the poly(amic acid) precursors were 0.81-1.81 dL/g. The poly(ether imide) with m-phenylenediamine as a diamine showed good organosol. Most of the cast poly(ether imide) films have had high tensile strengths and moduli. The glass-transition temps. of these poly(ether imide)s, except for those from rigid p-phenylenediamine and benzidine, were recorded between 211 and 246°C by differential scanning calorimetry. The softening temps. of all the poly(ether imide) films stayed within 210-330° according to thermomech. anal. No polymers showed significant decomposition before 500° in a nitrogen or air atmosphere. A comparative study of the properties with the corresponding poly(ether imide)s without pendant substituents was also made.

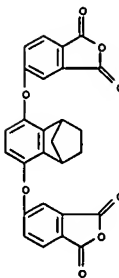
ACCESSION NUMBER: 2002:386393 CAPLUS  
 DOCUMENT NUMBER: 137:140860  
 TITLE: Synthesis and properties of poly(ether imide)s based on a benzonorbornane bis(ether anhydride)  
 AUTHOR(S): Hsiao, Sheng-Huei; Huang, Tai-Lin  
 CORPORATE SOURCE: Department of Chemical Engineering, Tatung University, Taipei, Taiwan  
 SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (2002), 40(11), 1712-1725  
 CODEN: JPACEC; ISSN: 0887-624X  
 PUBLISHER: John Wiley & Sons, Inc.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 444732-63-2P  
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process) (synthesis and properties of poly(ether imide)s based on a benzonorbornane bis(ether anhydride))  
 RN 444732-63-2 CAPLUS  
 CN 1,3-isobenzofurandione, 5,5'-[1,2,3,4-tetrahydro-1,4-methanonaphthalene-5,8-diyl]bis(oxy)]bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 444732-46-1  
 CMF C27 H16 O8

L42 ANSWER 13 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)  
 CM 2  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3

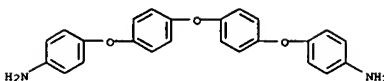


REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L42 ANSWER 14 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



CM 2  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3



REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT



L42 ANSWER 15 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN

AB A set of new aromatic polyamides containing ether and benzo-norbornane units were synthesized by the direct phosphorylation polycondensation of 3,6-bis(4-carboxy-phenoxy)benzo-norbornane with various aromatic diamines.

The polymers were produced in high yields and moderate to high inherent viscosities (0.64-1.70 dL/g). The polyamides derived from rigid diamines such as p-phenylenediamine and benzidine were semicryst. and insol. in organic solvents. The other polyamides were amorphous and organosol. and afforded flexible and tough films via solution casting. These films exhibited good mech. properties, with tensile strengths of 95-101 MPa, elongations at break of 13-25%, and initial moduli of 1.97-2.33 GPa. The amorphous polyamides showed glass-transition temps. between 176 and 212°C (by differential scanning calorimetry) and softening temps. between 194 and 213°C (by thermomech. anal.). Most of the polymers did not show significant weight loss before 450°C in nitrogen or in air. Some properties of these polyamides were also compared with those

of homologous counterparts without the pendent norbornane groups.

ACCESSION NUMBER: 2002:255308 CAPLUS

DOCUMENT NUMBER: 137:33626

TITLE: Synthesis and properties of aromatic polyamides based on a benzo-norbornane bis(ether carboxylic acid)

AUTHOR(S): Hsiao, Sheng-Huei; Huang, Tai-Lin

CORPORATE SOURCE: Department of Chemical Engineering, Tatung University,

Source: Taipei, Taiwan

Journal of Polymer Science, Part A: Polymer Chemistry (2002), 40(8), 947-957

CODEN: JPACEC; ISSN: 0887-624X

PUBLISHER: John Wiley & Sons, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

IT 437758-18-4P 437758-20-8P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(synthesis of aromatic polyamides based on a benzo-norbornane

bis(ether carboxylic acid))

RN 437758-18-4 CAPLUS

CM Benzoic acid, 4,4'-[1,2,3,4-tetrahydro-1,4-methanonaphthalene-5,8-diyl]bis(oxy)]bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

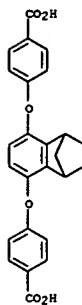
CM 1

CRN 437757-99-8

CMF C25 H20 O6

L42 ANSWER 15 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN

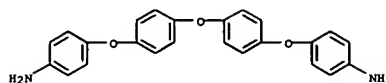
(Continued)



CM 2

CRN 13080-88-1

CMF C24 H20 N2 O3



RN 437758-20-8 CAPLUS

CM

Poly[oxy-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenyleneimino-carbonyl-1,4-phenyleneoxy(1,2,3,4-tetrahydro-1,4-methanonaphthalene-5,8-diyl)oxy-1,4-phenylene-carbonylimino-1,4-phenylene] (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

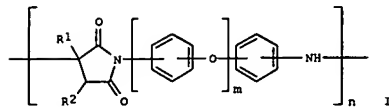
REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L42 ANSWER 16 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN

GI



AB The maleimide resin having a repeating unit I (R1, R2 = H, alkyl, (un)substituted phenyl; m = 0-5; n = 20-10,000) is prepared by mixing maleic

acid- or maleic anhydride-type monomer powder (e.g., maleic anhydride) with a diamine monomer powder (e.g., 1,3-bis(4-aminophenoxy)benzene) in a mole ratio 1:0.5-2.0 and heating the mixture at 60-200°.

ACCESSION NUMBER: 2002:236935 CAPLUS

DOCUMENT NUMBER: 136:263916

TITLE: Maleimide resins having good flexibility, heat resistance and mechanical strength for flexible printed circuit boards and their preparation

INVENTOR(S): Miyao, Kenji; Takahama, Keizo

PATENT ASSIGNEE(S): Sumitomo Bakelite Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JNOXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002088153	A2	20020327	JP 2000-280782	20000914
PRIORITY APPLM. INFO.:			JP 2000-280782	20000914

IT 405219-87-6P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(preparation of maleimide resins having good flexibility, heat

resistance and mech. strength for flexible printed circuit boards)

RN 405219-87-6 CAPLUS

CM 2,5-Furandione, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

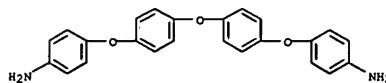
CM 1

CRN 13080-88-1

CMF C24 H20 N2 O3

L42 ANSWER 16 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN

(Continued)



CM 2

CRN 108-31-6

CMF C4 H2 O3



AB Polyimides are prepared by polymerization of aromatic or alicyclic diamines with  
 1R,1'S,3R,3'S,4R,4'S-dicyclohexyl-3,3',4,4'-tetracarboxylic acid dianhydride (1). Thus, 1 was polymerized with 4,4'-diaminodiphenyl ether to give a polyimide showing Tg 255° and 51-weight loss temperature 479°.

ACCESSION NUMBER: 2002:169658 CAPLUS  
 DOCUMENT NUMBER: 136:232710  
 TITLE: Preparation of heat-resistant soluble transparent polyimides  
 INVENTOR(S): Shiotani, Akinori; Shimazaki, Hiroshi  
 PATENT ASSIGNEE(S): Ube Industries, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
 CODEN: JTOOAR  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

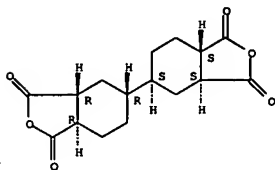
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002069179	AZ	20020308	JP 2000-259442	20000829
PRIORITY APPLN. INFO.:			JP 2000-259442	20000829

IT 403607-54-SP  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of heat-resistant soluble transparent polyimides)  
 RN 403607-54-5 CAPLUS  
 CN [5,5'-Bisobenzofuran]-1,1',3,3'-tetrone, dodecahydro-, (3aR,3'as,5R,5'S,7aR,7'as)-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

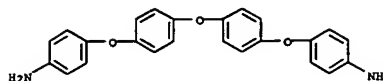
CRN 392232-02-9  
 CMF C16 H18 O6

Absolute stereochemistry.



CM 2

CRN 13080-88-1  
 CMF C24 H20 N2 O3



AB This communication is focused on the controlled design of star-shaped aromatic ethers with pendent cyclopentadienyliron moieties. A trimetallic core was prepared, which was then reacted with a number of oligomeric ether complexes to give star-shaped polymers with six, nine, twelve and fifteen pendent cationic cyclopentadienyliron moieties. Cyclic voltammetric studies showed reduction of the iron centers between -0.99 and -1.41 V. Thermogravimetric anal. showed that loss of the metallic moieties occurred between 225 and 284°.

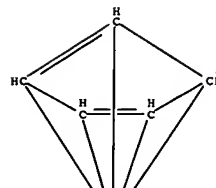
ACCESSION NUMBER: 2002:146248 CAPLUS  
 DOCUMENT NUMBER: 136:386674  
 TITLE: Star-shaped polyaromatic ethers coordinated to redox-active cyclopentadienyliron moieties  
 AUTHOR(S): Abd-El-Aziz, Alaa S.; Todd, Erin K.; Afifi, Tarek H.  
 CORPORATE SOURCE: Department of Chemistry, The University of Winnipeg, Winnipeg, MB, R3B 2E9, Can.  
 SOURCE: Macromolecular Rapid Communications (2002), 23(2), 113-117  
 CODEN: MRCOE3; ISSN: 1022-1336  
 PUBLISHER: Wiley-VCH Verlag GmbH  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 374823-05-9 374823-09-3

RL: RCT (Reactant); RACT (Reactant or reagent)  
 (star-shaped polyarom. ethers coordinated to redox-active cyclopentadienyliron moieties)  
 RN 374823-05-9 CAPLUS  
 CN [Iron(3+), {μ3-[η6:η6:η6-1-[4-(4-chlorophenoxy)phenoxy]-4-[4-(4-methylphenoxy)phenoxy]benzene]}tris(η5-2,4-cyclopentadien-1-yl)tri-, tris[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

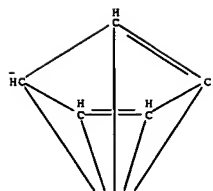
CM 1

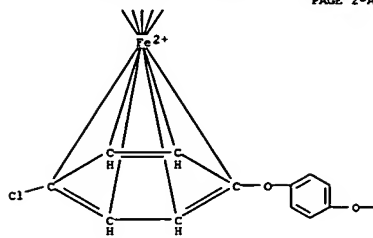
CRN 374823-04-8  
 CMF C46 H38 Cl Fe3 O4  
 CCI CCS

PAGE 1-A

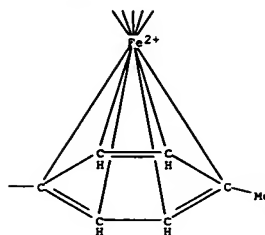
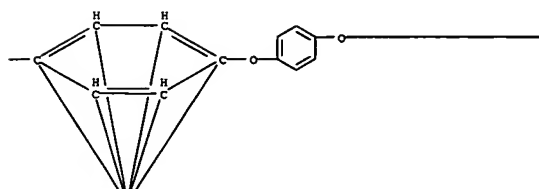


PAGE 1-C

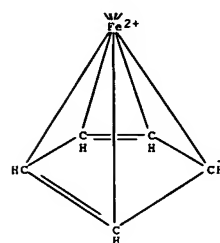




PAGE 2-B

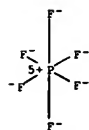


PAGE 2-C



PAGE 3-B

CH 2  
CRN 16919-18-9  
CHF F6 P  
CCI CCS

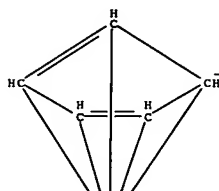


RN 374823-09-3 CAPLUS  
CN Iron(4+), [ $\mu_4$ -{ $\eta^6$ : $\eta^6$ : $\eta^6$ : $\eta^6$ -1-[4-(4-chlorophenoxy)phenoxy]phenoxy]-4-(4-(4-(4-methylphenoxy)phenoxy)phenoxy)benzene]]tetrakis( $\eta^5$ -2,4-cyclopentadien-1-yl)tetra-, tetrakis[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

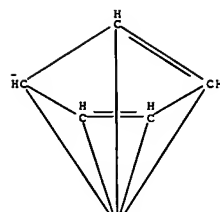
CM 1

CRN 374823-08-2  
CHF C63 H51 Cl Fe4 O6  
CCI CCS

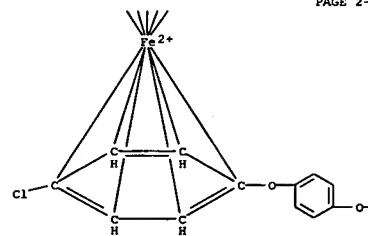
PAGE 1-A



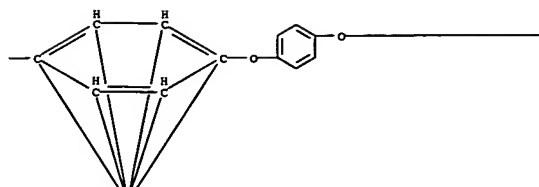
PAGE 1-D



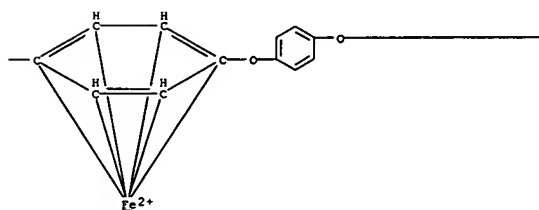
PAGE 2-A



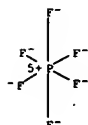
PAGE 2-B



PAGE 2-C

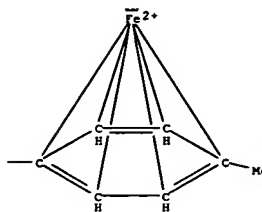


CM 2

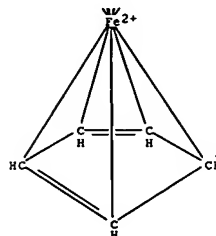
CRN 16919-18-9  
CMF F6 P  
CCI CCS

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT

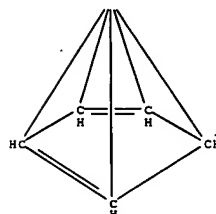
PAGE 2-D



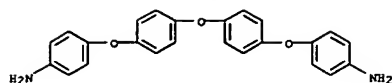
PAGE 3-B



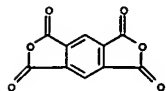
PAGE 3-C



L42 ANSWER 19 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
AB Polymerization of aromatic diamines with pyromellitic dianhydride (PMDA)  
and  
3,3',4,4'-biphenyltetracarboxylic dianhydride (BPDA) was carried out and  
the resulting poly(amic acid)s were thermally cyclodehydrated to aromatic  
polyimides. The glass transition temperature (Tg), thermal stability,  
and  
thermal expansion coefficient of the polyimides were measured, and  
wide-angle  
X-ray diffraction data were obtained. Structure-property relationships  
were elucidated in terms of structure of fragments in the polymer chain.  
The PMDA-based polyimides generally have higher Tg than the BPDA-based  
analogs. The dilution of the imide content by insertion of oxyphenylene  
segments into the diamines resulted in significant decrease of Tg. The  
introduction of m- or o-phenylene units into the backbone usually  
resulted  
in a decrease of Tg. The attachment of pendant groups on the backbone  
led  
to decrease or increase of Tg, depending on the structure of pendant  
groups. As evidenced by x-ray diffraction, the polyimides derived from  
rigid, rod-like diamines or the diamines having two or three  
p-oxyphenylenes, showed a higher crystallinity. The presence of  
aliphatic  
pendant groups caused a slight decrease of thermal stability of the  
polyimides. Some polyimides obtained from p- or m-phenylenediamine had  
low thermal expansion coefficient, below 2 + 10-5/°.  
ACCESSION NUMBER: 2002:136897 CAPLUS  
DOCUMENT NUMBER: 137:20843  
TITLE: Structure-property study of polyimides derived from  
PMDA and BPDA dianhydrides with structurally  
different  
diamines  
AUTHOR(S): Hsiao, Sheng-Huei; Chen, Yu-Jen  
CORPORATE SOURCE: Department of Chemical Engineering, Tatung  
University,  
Taipai, 10451, Taiwan  
SOURCE: European Polymer Journal (2002), 38(4), 815-828  
CODEN: EUPJAG; ISSN: 0014-3057  
PUBLISHER: Elsevier Science Ltd.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
IT 53938-99-1P 72356-19-5P  
RL: PREP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(substituent and structure effects of diamines on properties of  
polyimides derived from PMDA and BPDA)  
RN 53938-99-1 CAPLUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with  
4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)  
CM 1  
CRN 13080-88-1  
CMF C24 H20 N2 O3

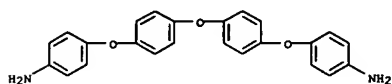


CM 2

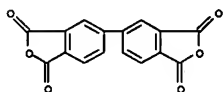
CRN 89-32-7  
CMF C10 H2 O6

RN 72356-19-5 CAPLUS  
CN [5,5'-Bisobenzofuran]-1,1',3,3'-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

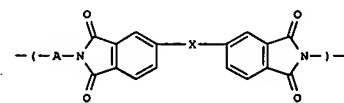
CM 1

CRN 13080-88-1  
CMF C24 H20 N2 O3

CM 2

CRN 2420-87-3  
CMF C16 H6 O6

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS



AB The invention refers to polyimide optical components retaining excellent properties inherent in polyimides, i.e., heat resistance, mech. characteristics, elec. characteristics, thermal oxidation stability, and chemical resistance, and exhibit good transparency and high refractive indexes, wherein the components comprise polyimides 1 prepared using diamines and tetracarboxylic acid dianhydrides as essential components [A = -PhR1A1PhR2-, -PhR3-O-PhR4-O-PhR5-, PhR6-O-Ph-A2-Ph-O-PhR7; X = direct bond, -O-, -SO2- or C(CF3)2-; R1,2 = H, Cl, Br, CH3 or CF3; R3-5 H, Cl, CH3, CN3 or CF3; R6,7 = H, CF3; A1 = O-, -S-, -CO-, -CH2-, -SO2-, -CMe2 or C(CF3)2-; A2 = direct bond, -O-, -S-, -CO-, -SO2-, -CMe2, or C(CF3)2-].

ACCESSION NUMBER: 2002:123368 CAPLUS  
DOCUMENT NUMBER: 136:191472  
TITLE: Optical components made of polyimide resins  
INVENTOR(S): Okawa, Yuichi; Sakata, Yoshihiro; Ono, Takashi; Tamai,

PATENT ASSIGNEE(S): Shoji  
SOURCE: Mitsui Chemicals, Inc., Japan  
PCT Int. Appl., 97 pp.  
CODEN: PIXXD2

DOCUMENT TYPE: Patent  
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002012926	A1	20020214	WO 2001-JP6820	20010808
W: CN, JP, KR, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
EP 1237015	A1	20020904	EP 2001-955594	20010808
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
TW 499569	B	20020821	TW 2001-90119470	20010809
US 2003064235	A1	20030403	US 2002-110166	20020409
PRIORITY APPLN. INFO.:			JP 2000-241371	A 20000809
			JP 2000-241372	A 20000809
			JP 2001-103843	A 20010402
			WO 2001-JP6820	W 20010808

IT 110281-79-3 110281-79-3D, aniline terminated  
181709-10-4 181709-10-4D, aniline terminated  
399506-43-5 399506-43-5D, phthalic anhydride terminated

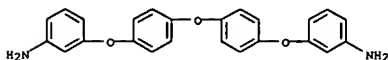
FORMAT

399506-44-6 399506-44-6D, naphthalenedioic anhydride terminated 399506-46-8 399506-46-8D, aniline terminated 399506-47-9 399506-47-9D, aniline terminated

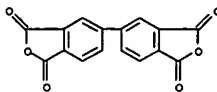
RL: DEV (Device component use); USES (Uses)  
(optical components made of polyimide resins)

RN 110281-79-3 CAPLUS  
CN [5,5'-Bisobenzofuran]-1,1',3,3'-tetrone, polymer with 3,3'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1

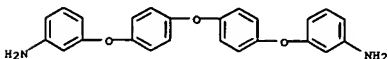
CRN 58883-55-9  
CMF C24 H20 N2 O3

CM 2

CRN 2420-87-3  
CMF C16 H6 O6

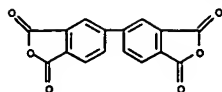
RN 110281-79-3 CAPLUS  
CN [5,5'-Bisobenzofuran]-1,1',3,3'-tetrone, polymer with 3,3'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1

CRN 58883-55-9  
CMF C24 H20 N2 O3

CM 2

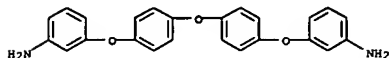
CRN 2420-87-3  
CMF C16 H6 O6



RN 181709-10-4 CAPLUS  
CN 1,3-isobenzofurandione, 5,5'-oxybis-, polymer with 3,3'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

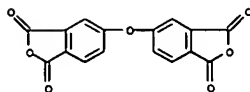
CM 1

CRN 58883-55-9  
CMF C24 H20 N2 O3



CM 2

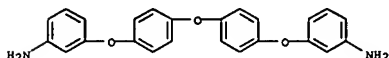
CRN 1823-59-2  
CMF C16 H6 O7



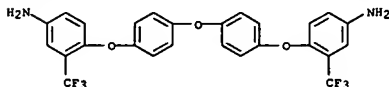
RN 181709-10-4 CAPLUS  
CN 1,3-isobenzofurandione, 5,5'-oxybis-, polymer with 3,3'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 58883-55-9  
CMF C24 H20 N2 O3

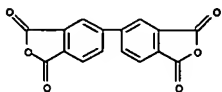


CM 2



CM 2

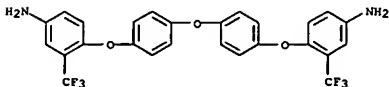
CRN 2420-87-3  
CMF C16 H6 O6



RN 399506-44-6 CAPLUS  
CN 1,3-isobenzofurandione, 5,5'-oxybis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[3-(trifluoromethyl)benzenamine] (9CI) (CA INDEX NAME)

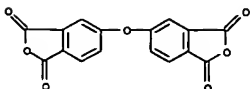
CM 1

CRN 399506-42-4  
CMF C26 H18 F6 N2 O3



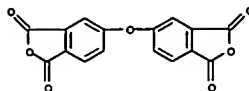
CM 2

CRN 1823-59-2  
CMF C16 H6 O7



RN 399506-44-6 CAPLUS  
CN 1,3-isobenzofurandione, 5,5'-oxybis-, polymer with 4,4'-[oxybis(4,1-

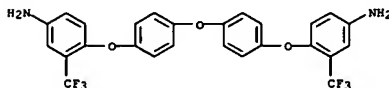
CRN 1823-59-2  
CMF C16 H6 O7



RN 399506-43-5 CAPLUS  
CN [5,5'-Bisobenzofuran]-1,1',3,3'-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[3-(trifluoromethyl)benzenamine] (9CI) (CA INDEX NAME)

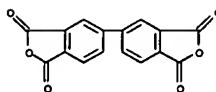
CM 1

CRN 399506-42-4  
CMF C26 H18 F6 N2 O3



CM 2

CRN 2420-87-3  
CMF C16 H6 O6



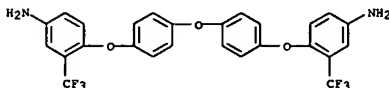
RN 399506-43-5 CAPLUS  
CN [5,5'-Bisobenzofuran]-1,1',3,3'-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[3-(trifluoromethyl)benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 399506-42-4  
CMF C26 H18 F6 N2 O3

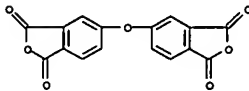
CM 1

CRN 399506-42-4  
CMF C26 H18 F6 N2 O3



CM 2

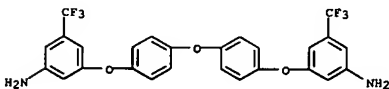
CRN 1823-59-2  
CMF C16 H6 O7



RN 399506-46-8 CAPLUS  
CN [5,5'-Bisobenzofuran]-1,1',3,3'-tetrone, polymer with 3,3'-[oxybis(4,1-phenyleneoxy)]bis[5-(trifluoromethyl)benzenamine] (9CI) (CA INDEX NAME)

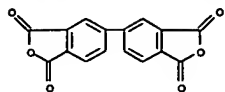
CM 1

CRN 399506-45-7  
CMF C26 H18 F6 N2 O3



CM 2

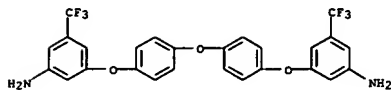
CRN 2420-87-3  
CMF C16 H6 O6



RN 399506-46-8 CAPIUS  
CN [5,5'-Bis(isobenzofuran)-1,1',3,3'-tetrone, polymer with 3,3'-(oxybis(4,1-phenyleneoxy))bis[5-(trifluoromethyl)benzenamine] (9CI) (CA INDEX NAME)]

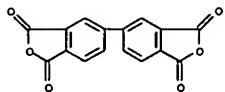
CH 1

CRN 399506-45-7  
CMF C26 H18 F6 N2 O3



CH 2

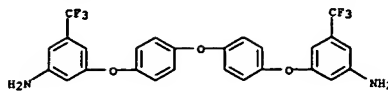
CRN 2420-87-3  
CMF C16 H6 O6



RN 399506-47-9 CAPIUS  
CN 1,3-Isobenzofurandione, 5,5'-oxybis-, polymer with 3,3'-(oxybis(4,1-phenyleneoxy))bis[5-(trifluoromethyl)benzenamine] (9CI) (CA INDEX NAME)]

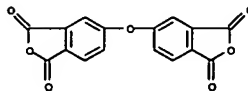
CH 1

CRN 399506-45-7  
CMF C26 H18 F6 N2 O3



CH 2

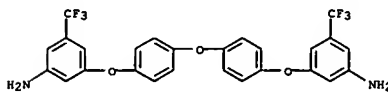
CRN 1823-59-2  
CMF C16 H6 O7



RN 399506-47-9 CAPIUS  
CN 1,3-Isobenzofurandione, 5,5'-oxybis-, polymer with 3,3'-(oxybis(4,1-phenyleneoxy))bis[5-(trifluoromethyl)benzenamine] (9CI) (CA INDEX NAME)]

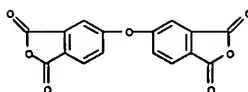
CH 1

CRN 399506-45-7  
CMF C26 H18 F6 N2 O3



CH 2

CRN 1823-59-2  
CMF C16 H6 O7



REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS

trimellitic anhydride (TMA) and various aromatic diamines. By different processes, PAIh-h-t-t containing alternating (amide-amide)-(imide-imide) sequences and PAIh-t containing amide-imide sequences could be obtained through direct polycondensation. Comparison of PAIh-h-t-t and PAIh-t, which had different sequence orders and were prepared from TMA and 12 diamines, showed that the latter had better solubility and needed less quantity of solvent and salt (CaCl<sub>2</sub>) during polymerization, but both two series PAI using p-substituted diamines (e.g., p-phenylenediamine) showed poor solubility. Series PAIh-h-t-t possessed larger initial modulus but smaller elongation at break than series PAIh-t. For the thermal properties, most of series PAIh-t had glass transition temps. higher than corresponding series PAIh-h-t-t, but these two series were similar in the 10% weight loss temps.

and the char yields at 800° in nitrogen.

ACCESSION NUMBER: 2001:711407 CAPIUS

DOCUMENT NUMBER: 136:6448

TITLE: Synthesis and characterization of two poly(trimellitimide-imide) series with different segment order by direct polycondensation  
AUTHOR(S): Yang, Chin-Ping; Wei, Chi-Shu  
CORPORATE SOURCE: Department of Chemical Engineering, Tatung University,

SOURCE: Taipei, 104, Taiwan  
Journal of Applied Polymer Science (2001), 82(6), 1556-1567

CODEN: JAPNAB; ISSN: 0021-8995

PUBLISHER: John Wiley & Sons, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

IT 148855-50-9P 376348-29-7P 376348-31-1P

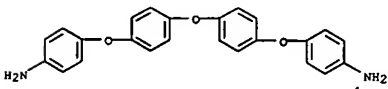
RL: PRP (Properties); SPN (Synthetic Preparation); PREP (Preparation) (synthesis of two poly(trimellitimide-imide) series with different segment order by direct polycondensation)

RN 148855-50-9 CAPIUS

CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, polymer with 4,4'-(oxybis(4,1-phenyleneoxy))bis[benzenamine] (9CI) (CA INDEX NAME)]

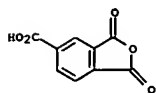
CH 1

CRN 13080-88-1  
CMF C24 H20 N2 O3



CH 2

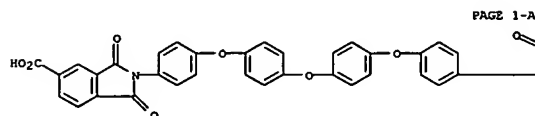
L42 ANSWER 21 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)  
 CRN 552-30-7  
 CMF C9 H4 O5



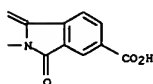
RN 376348-29-7 CAPLUS  
 CM 1H-isoindole-5-carboxylic acid, 2,2'-[oxybis(4,1-phenyleneoxy)]bis[2,3-dihydro-1,3-dioxo-4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 153404-72-9  
 CMF C42 H24 N2 O11



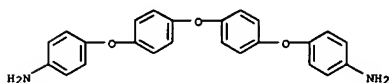
PAGE 1-A



PAGE 1-B

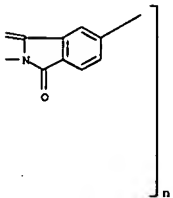
CM 2

CRN 13080-88-1  
 CMF C24 H20 N2 O3

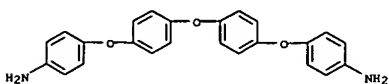


L42 ANSWER 21 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

PAGE 1-C



IT 13080-88-1  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (synthesis of two polytrimeellitamideimide series with different  
 segment order by direct polycondensation)  
 RN 13080-88-1 CAPLUS  
 CM Benzenamine, 4,4'-[oxybis(4,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)

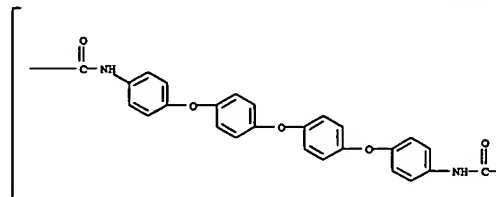


REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
 FORMAT

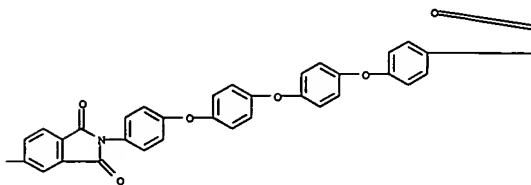
L42 ANSWER 21 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)  
 RN 376348-31-1 CAPLUS

CM Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenylene(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonylimino-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenyleneimino-carbonyl] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L42 ANSWER 22 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB Two series of alicyclic polyimides composed of cis- and trans-bicyclohexyl-3,3',4,4'-tetracarboxylic dianhydrides (DCDAs) and aromatic diamines were prepared. All the cis-polymers could be readily prepared by one- and two-step methods. However, a two-step method is preferably applied in the preparation of trans-polymers, because in a one-step method the

trans-configuration is partially lost at higher temps. These polyimide solns. could be cast into tough and flexible films, which were characterized by inherent viscosity, GPC, DSC, and TGA measurements, and UV-vis spectroscopy. The glass transition temps. (Tg's) of the polymers were in the range of 210-270°C and the 5% weight loss temps. were around 480°C. The optical transmittances of these films were more than 80% at 350 nm for ca. 15 µm thickness.

ACCESSION NUMBER: 2001:682094 CAPLUS

DOCUMENT NUMBER: 136:6435

TITLE: Preparation of transparent polyimides derived from cis- and trans-dicyclohexyl-3,3',4,4'-tetracarboxylic dianhydrides

AUTHOR(S): Shiotani, Akinori; Shimazaki, Hiroshi; Matsuo, Makoto  
 CORPORATE SOURCE: Chiba Research Laboratory, UBE Industries Ltd., Ichihara City, 290-0045, Japan

SOURCE: Macromolecular Materials and Engineering (2001), 286(7), 434-441

PUBLISHER: CODEN: MMEFPA; ISSN: 1438-7492

DOCUMENT TYPE: Wiley-VCH Verlag GmbH

LANGUAGE: Journal

IT 376347-23-8P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (transparent polyimides derived from bicyclohexyltetracarboxylic dianhydrides)

RN 376347-23-8 CAPLUS

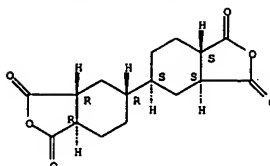
CM [5,5'-Bisobenzofuran]-1,1',3,3'-tetrone, dodecahydro-, (3aR,3'aS,5R,5'S,7aR,7'aS)-rel-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 339537-60-9

CMF C16 H18 O6

Relative stereochemistry.

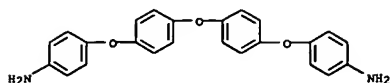




L42 ANSWER 22 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)

CM 2

CRN 13080-88-1  
CMF C24 H20 N2 O3



REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L42 ANSWER 23 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN

AB Various synthesis routes were explored to prepare dendrimers coordinated to cationic cyclopentadienyl-iron. The reaction of dichloroarene cyclopentadienyl-iron (FeCP) complexes with phloroglucinol resulted in the formation of a trimetallic ether complex containing terminal chloro groups.

The resulting complex was subsequently reacted with other aromatic ether complexes using a convergent approach to yield organometallic dendrimers with pendant metallic moieties. The redox properties of the metallodendrimers were explored using cyclic voltammetry. The reduction potential of the Fe complex species falls within -1.2 and -1.4 V, and peripheral and inner FeCP moieties can be differentiated at low temps.

and low sweep rates. Aromatic ether complexes were also synthesized that include other functional groups in the backbone; functionalization with carboxylic acid groups resulted in aromatic ether dendrimers soluble in basic solution

ACCESSION NUMBER: 2001:662385 CAPIUS

DOCUMENT NUMBER: 136:20311

TITLE: Synthesis and electrochemical studies of cationic organoiron dendrimers

AUTHOR(S): Abd-El-Aziz, Alaa S.; Todd, Erin K.; Afifi, Tarek H.  
CORPORATE SOURCE: Department of Chemistry, The University of Winnipeg, Winnipeg, MB, R3B 2E9, Can.

SOURCE: Polymer Preprints (American Chemical Society, Division

of Polymer Chemistry) (2001), 42(2), 597-598

CODEN: ACPPAY; ISSN: 0032-3934

PUBLISHER: American Chemical Society, Division of Polymer Chemistry

DOCUMENT TYPE: Journal; (computer optical disk)

LANGUAGE: English

IT 374823-05-9P 374823-09-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; preparation of cyclopentadienyliron complex-aromatic ether dendrimers and electrochem. redox characteristics and solubility as function of branching)

RN 374823-05-9 CAPIUS

CN Iron(3+), [μ3-{η6:η6-1-[4-(4-chlorophenoxy)phenoxy]-4-[4-(4-methylphenoxy)phenoxy]benzene}]tris(η5-2,4-cyclopentadien-1-yl)tri-, tris[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

CM 1

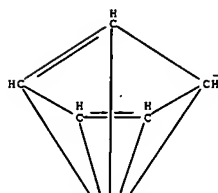
CRN 374823-04-8

CMF C46 H38 Cl Fe3 O4

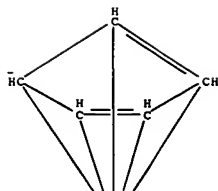
CCI CCS

L42 ANSWER 23 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)

PAGE 1-A

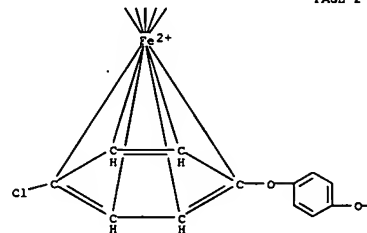


PAGE 1-C

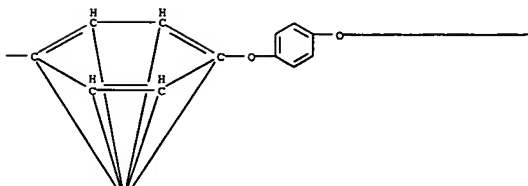


L42 ANSWER 23 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)

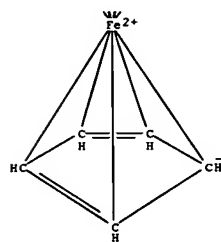
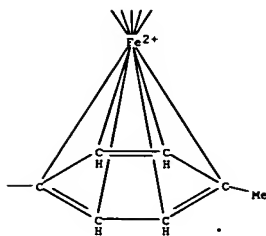
PAGE 2-A



PAGE 2-B



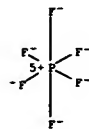
PAGE 2-C



CM 2

CRN 16919-18-9  
 CHF F6 P  
 CCI CCS

PAGE 3-B



RN 374823-09-3 CAPLUS

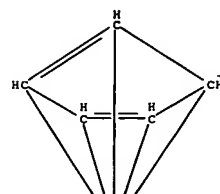
CN Iron(4+), [μ4-{η6:η6:η6:η6-1-[4-[4-(4-

chlorophenoxy]phenoxy]phenoxy]-4-[4-[4-(4-methylphenoxy)phenoxy]phenoxy]benzene]]tetrakis(η5-2,4-cyclopentadien-1-yl)tetra-,  
 tetrakis[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

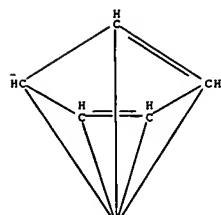
CM 1

CRN 374823-08-2  
 CHF C63 H51 Cl Fe4 O6  
 CCI CCS

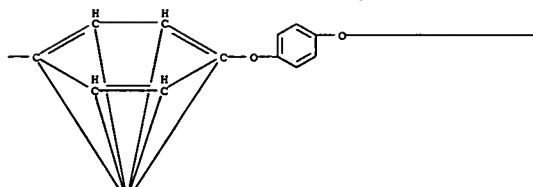
PAGE 1-A



PAGE 1-D

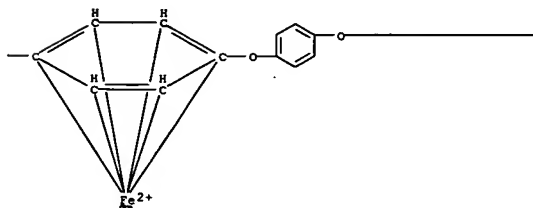
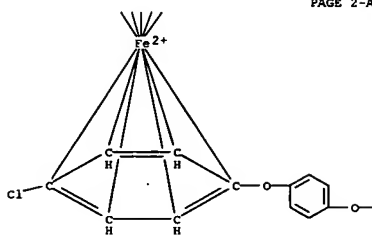


PAGE 2-B

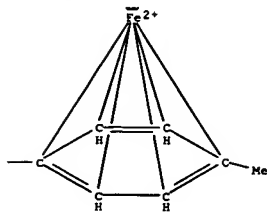


PAGE 2-A

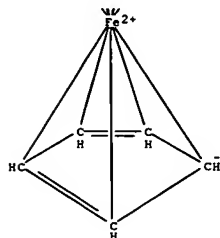
PAGE 2-C



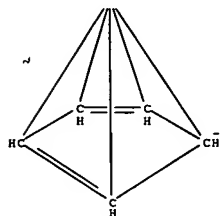
PAGE 2-D



PAGE 3-B



PAGE 3-C



AB A variety of homometallic (Cp<sup>+</sup>Ru<sup>+</sup>) and heterometallic (CpFe<sup>+</sup>-Cp<sup>+</sup>Ru<sup>+</sup>) oligomers with one to five metal moieties were prepared in high yields (74-90%) via nucleophilic aromatic substitution reactions. For the mixed metal systems, it is shown that the arrangement of the metal moieties along the backbone can be controlled. In addition, the synthesis of heterometallic polymers is described, along with their decomplexation and thermal properties. It was found that the thermal properties and

solubility of the systems are greatly dependent on the linkages within the polymer backbone.

ACCESSION NUMBER: 2001:491284 CAPIUS  
DOCUMENT NUMBER: 135:227342  
TITLE: Synthesis of oligomeric and polymeric ethers containing the Cp<sup>+</sup>Ru<sup>+</sup> and CpFe<sup>+</sup> metal moieties  
AUTHOR(S): De Denuis, Christine R.; Hoffa, Lacey M.; Todd, Erin K.; Abd-El-Aziz, Alaa S.  
CORPORATE SOURCE: Department of Chemistry, Hobart and William Smith Colleges, Geneva, NY, 14456, USA  
SOURCE: Journal of Inorganic and Organometallic Polymers (2000), 10(4), 189-208  
CODEN: JIOPE4; ISSN: 1053-0495  
PUBLISHER: Kluwer Academic/Plenum Publishers  
DOCUMENT TYPE: Journal  
LANGUAGE: English

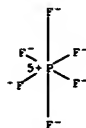
IT 261968-52-9P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(heterometallic oligomers; synthesis of oligomeric and polymeric ethers containing the Cp<sup>+</sup>Ru<sup>+</sup> and CpFe<sup>+</sup> metal moieties)  
RN 261968-52-9 CAPIUS  
CN Ruthenium(3+), [μ<sub>3</sub>-[η<sup>6</sup>:η<sup>6</sup>-1,4-bis[4-(4-chlorophenoxy)phenoxy]benzene]]bis[(η<sup>5</sup>-2,4-cyclopentadien-1-yl)iron] [(1,2,3,4,5-η)-1,2,3,4,5-pentamethyl-2,4-cyclopentadien-1-yl]-, tris[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

CM 1

CRN 261968-51-8  
CMF C50 H45 Cl2 Fe2 O4 Ru  
CCI CCS

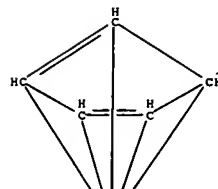
CM 2

CRN 16919-18-9  
CMF F6 P  
CCI CCS

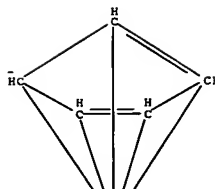


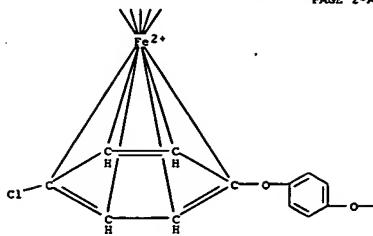
REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

PAGE 1-A

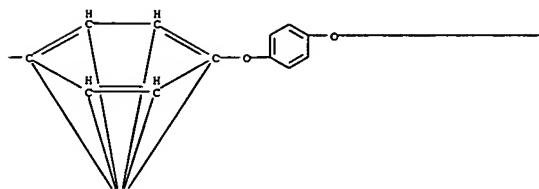


PAGE 1-C

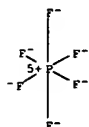




PAGE 2-B



CM 2  
CRN 16919-18-9  
CMF F6 P  
CCI CCS

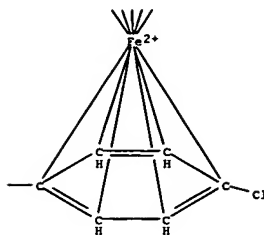


IT 261968-54-1P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(heterometal polymer; synthesis of oligomeric and polymeric ethers  
containing the Cp<sup>+</sup>Ru<sup>+</sup> and CpFe<sup>+</sup> metal moieties)  
RN 261968-54-1 CAPLUS  
CN Ruthenium(3+), {u3-[η6:η6:η6-1,4-bis[4-(4-  
chlorophenoxy)phenoxy]benzene]}bis[(η5-2,4-cyclopentadien-1-  
yl)iron] [(1,2,3,4,5-η)-1,2,3,4,5-pentamethyl-2,4-cyclopentadien-1-yl]-  
, tris[hexafluorophosphate(1-)], polymer with 1,8-octanedithiol (9CI)  
(CA  
INDEX NAME)  
CM 1  
CRN 1191-62-4  
CMF C8 H18 S2

HS-(CH<sub>2</sub>)<sub>8</sub>-SH

CM 2  
CRN 261968-52-9  
CMF C50 H45 Cl2 Fe2 O4 Ru . 3 F6 P  
CM 3  
CRN 261968-51-8  
CMF C50 H45 Cl2 Fe2 O4 Ru  
CCI CCS

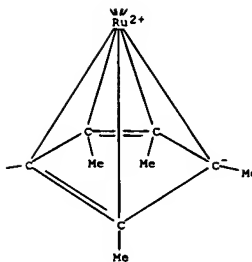
PAGE 2-C



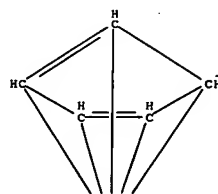
PAGE 3-A

Me

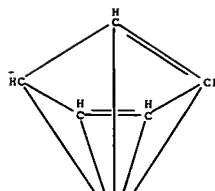
PAGE 3-B

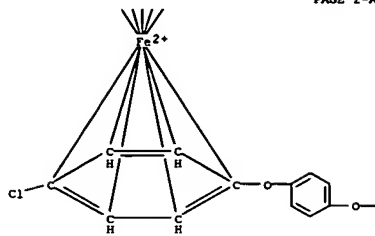


PAGE 1-A

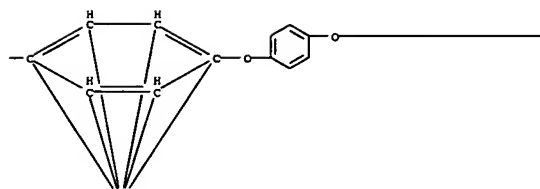


PAGE 1-C

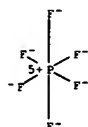




PAGE 2-B



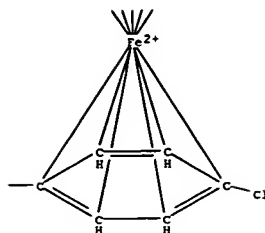
CM 4  
CRN 16919-18-9  
CMF F6 P  
CCI CCS



IT 359448-89-8P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(triruthenium oligomer; synthesis of oligomeric and polymeric ethers containing the Cp<sup>+</sup>Ru<sup>+</sup> and Cp<sup>+</sup>Fe<sup>+</sup> metal moieties)  
RN 359448-89-8 CAPLUS  
CN Ruthenium(3+), [μ<sub>3</sub>-[η<sup>6</sup>:η<sup>6</sup>:η<sup>6</sup>-1,4-bis[4-(4-chlorophenoxy)phenoxy]benzene]]tris[(1,2,3,4,5-η)-1,2,3,4,5-pentamethyl-2,4-cyclopentadien-1-yl]]tri-, tris[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

CM 1  
CRN 359448-88-7  
CMF C60 H65 Cl2 O4 Ru3  
CCI CCS

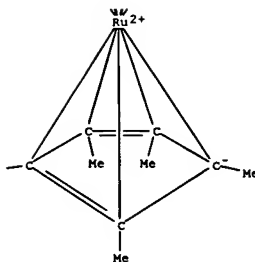
PAGE 2-C



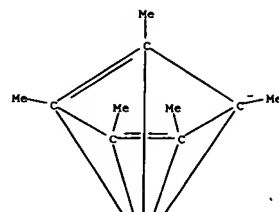
PAGE 3-A

Me

PAGE 3-B



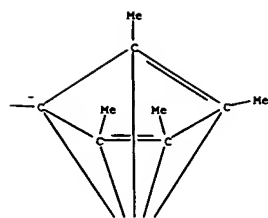
PAGE 1-A



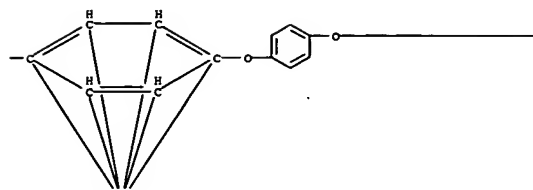
PAGE 1-B

Me

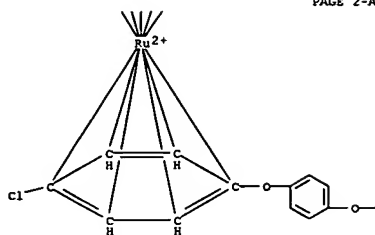
PAGE 1-C



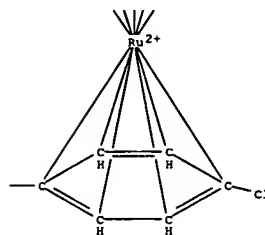
PAGE 2-B



PAGE 2-A



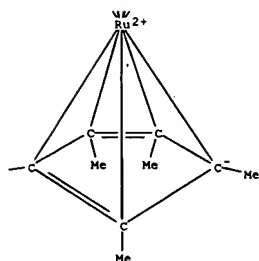
PAGE 2-C



PAGE 3-A

Me<sup>-</sup>

PAGE 3-B

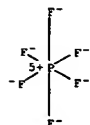


CH 2

CRN 16919-18-9

CMF F6 P

CCI CCS



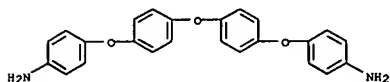
REFERENCE COUNT:

24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR

L42 ANSWER 25 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB Aromatic polyamide-polyethers containing different nos. of  
 p-oxyphenylene groups  
 and different catenated positions in the benzene rings were prepared from  
 terephthalic acid (TPA) or isophthalic acid (IPA) with various  
 aryloxy-containing dianilines by means of the phosphorylation  
 polycondensation  
 reaction. Most of the polymers were moderately to highly crystalline, as  
 indicated by X-ray diffraction and DSC measurements. Polyisophthalamides  
 were readily soluble in polar amide-type solvents such as  
 N-methyl-2-pyrrolidone and AcNMe2. Some noncryst. polymers afforded  
 tough  
 films upon solution casting. Most polyisophthalamides revealed  
 discernible  
 glass transitions (Tg) in their DSC curves in the range of  
 215-238°C. No discernible Tg were observed for the polyamides of TPA.  
 The thermal stability of the polymers did not show clear dependence on  
 the structure of the diacid or the diamine. In addition, a series of  
 polyamides having pendent groups was synthesized from the  
 polycondensation  
 of TPA or IPA with 1,4-bis(4-aminophenoxy)benzene or its derivs. with a  
 Me, tert-Bu, or Ph substituent on the central benzene ring. In most  
 cases, the incorporation of pendent groups generally resulted in enhanced  
 solubility and decreased Tg and crystallinity.

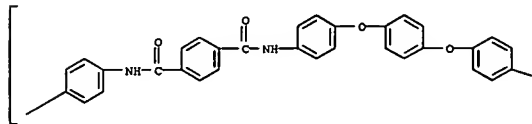
ACCESSION NUMBER: 2001:222773 CAPLUS  
 DOCUMENT NUMBER: 135:5930  
 TITLE: Polyamides based on diamines containing aryloxy  
 groups: structure-property relationships  
 AUTHOR(S): Hsiao, Sheng-Huei; Chen, Yu-Jen  
 CORPORATE SOURCE: Department of Chemical Engineering, Tatung  
 University,  
 SOURCE: Taipei, 10451, Taiwan  
 JOURNAL OF POLYMER RESEARCH (2000), 7(4), 205-213  
 CODEN: JPORP; ISSN: 1022-9760  
 PUBLISHER: Polymer Society, Taipei  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 26796-88-3P 26913-01-9P 62174-26-9P  
 161739-80-6P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (preparation and structure-property relationships of)  
 RN 26796-88-3 CAPLUS  
 CN 1,3-Benzenedicarboxylic acid, polymer with 4,4'-[oxybis(4,1-  
 phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3

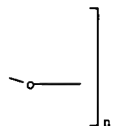


L42 ANSWER 25 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

PAGE 1-A

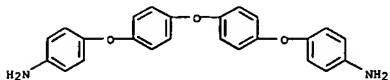


PAGE 1-B

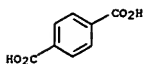


RN 161739-80-6 CAPLUS  
 CN 1,4-Benzenedicarboxylic acid, polymer with 4,4'-[oxybis(4,1-  
 phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3



CM 2  
 CRN 100-21-0  
 CMF C8 H6 O4



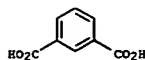
REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR

Page 115

L42 ANSWER 25 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

CM 2

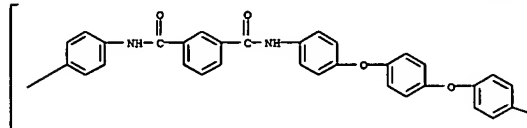
CRN 121-91-5  
 CMF C8 H6 O4



RN 26913-01-9 CAPLUS  
 CN

Poly(oxy-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenyleneiminocarbonyl-1,3-  
 phenylenecarbonylimino-1,4-phenylene) (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



RN 62174-26-9 CAPLUS  
 CN

Poly(oxy-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenyleneiminocarbonyl-1,4-  
 phenylenecarbonylimino-1,4-phenylene) (9CI) (CA INDEX NAME)

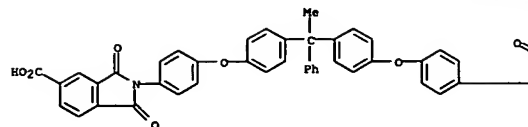
L42 ANSWER 25 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE  
 FORMAT

L42 ANSWER 26 OF 231 CAPLUS COPYRIGHT 2005 ACS ON STN  
 AB A dicarboxylic acid (1,1-bis(4-(4-trimellitimidophenoxy)phenyl)-1-phenylethane (II)) bearing two performed imide rings was prepared from the condensation of 1,1-bis(4-(4-aminophenoxy)phenyl)-1-phenylethane and trimellitic anhydride in a 1/2 molar ratio. A novel family of poly(amide-imide)s with inherent viscosities of 0.83-1.51 dL/g was prepared by tri-Ph phosphite-activated polycondensation from the diimidediacid II with various aromatic diamines in a medium consisting of N-methyl-2-pyrrolidinone (NMP), pyridine, and calcium chloride. Because the 1,1,1-triphenylethane group of II was unsym., most of the resulting polymers showed an amorphous nature and were readily soluble in polar solvents such as NMP and N,N-dimethylacetamide. All the soluble poly(amide-imide)s afforded tough, transparent, and flexible films, which had tensile strengths ranging from 88 to 102 MPa, elongations at break from 6 to 11%, and initial moduli from 2.23 to 2.71 GPa. The synthesized poly(amide-imide)s possessed glass-transition temps. from 250 to 287°C. The poly(amide-imide)s exhibited excellent thermal stabilities and had 10% weight losses from 501 to 534°C under a nitrogen atmosphere. A comparative study of some corresponding poly(amide-imide)s is also presented.

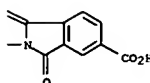
ACCESSION NUMBER: 2001:186590 CAPLUS  
 DOCUMENT NUMBER: 134:367305  
 TITLE: Synthesis and properties of organosoluble poly(amide-imide)s with propeller-shaped 1,1,1-triphenylethane units in the main chain  
 AUTHOR(S): Yang, Chin-Ping; Chen, Ruei-Shin; Chen, Ching-Der  
 CORPORATE SOURCE: Department of Chemical Engineering, Tatung University,  
 SOURCE: Taipei, 104, Taiwan  
 JOURNAL OF Polymer Science, Part A: Polymer Chemistry (2001), 39(6), 775-787  
 CODEN: JPACEC; ISSN: 0887-624X  
 PUBLISHER: John Wiley & Sons, Inc.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 340187-77-1P 340187-87-3P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (organosol. poly(amide-imide)s with propeller-shaped 1,1,1-triphenylethane units in the main chain)  
 RN 340187-77-1 CAPLUS  
 CN 1H-Isindole-5-carboxylic acid, 2,2'-[(1-phenylethylidene)bis(4,1-phenyleneoxy-4,1-phenylene)]bis[2,3-dihydro-1,3-dioxo-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 153404-74-1  
 CMF C50 H32 N2 O10

L42 ANSWER 26 OF 231 CAPLUS COPYRIGHT 2005 ACS ON STN (Continued)

PAGE 1-A

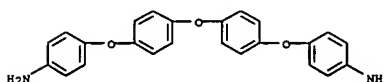


PAGE 1-B



CM 2

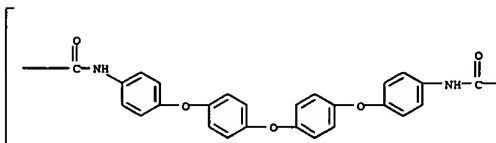
CRN 13080-88-1  
 CMF C24 H20 N2 O3



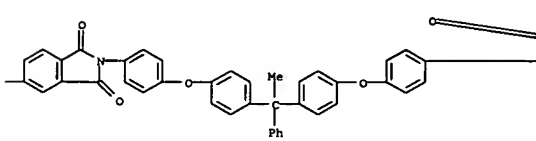
RN 340187-87-3 CAPLUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isindole-5,2-diyl)-1,4-phenyleneoxy-1,4-phenylene(1-phenylethylidene)-1,4-phenylene(1,3-dihydro-1,3-dioxo-2H-isindole-2,5-diyl)carbonylimino-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenyleneimino] (9CI) (CA INDEX NAME)

L42 ANSWER 26 OF 231 CAPLUS COPYRIGHT 2005 ACS ON STN (Continued)

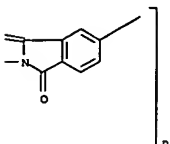
PAGE 1-A



PAGE 1-B



PAGE 1-C

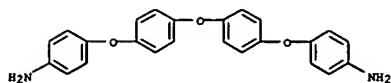


REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
 FORMAT

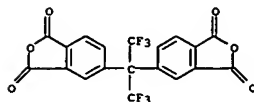
L42 ANSWER 27 OF 231 CAPLUS COPYRIGHT 2005 ACS ON STN  
 AB Plasma polymerization of glycidyl methacrylate (GMA) on pristine and plasma-pretreated Si(100) surfaces was carried out. The epoxide functional groups of the plasma-polymerized GMA (pp-GMA) could be preserved, to a large extent, by controlling the glow discharge parameters. The pp-GMA film was used as an adhesion promotion layer for the thermal imidization of fluorinated poly(amic acid) (FPAA) precursors on Si substrates. The fluorinated polyimide (FPI)/pp-GMA-Si laminates so formed exhibited a 180°-peel adhesion strength as high as 10 N/cm. This value was much higher than the negligible adhesion strength for the FPI/Si laminates obtained from thermal imidization of the FPAA on either the pristine or the argon-plasma-treated Si surfaces. The high adhesion strengths of the FPI/pp-GMA-Si laminates were attributed to the synergistic effect of coupling the curing of the epoxide groups in the pp-GMA layer with the imidization process of the FPAA and the fact that the plasma-deposited GMA chains were covalently tethered on the Si(100) surface. Comparison of the adhesion strengths of the FPI/pp-GMA-Si laminates to that of the polyimide (PI)/pp-GMA-Si laminate, formed by thermal imidization of the poly(amic acid) precursor of poly(pyromellitic dianhydride-co-4,4'-oxydianiline) on pp-GMA-Si, suggests that the presence of fluorine-containing groups, such as -CF<sub>3</sub>, in the PI chains has a negligible effect on the adhesion property of the FPIs on the Si(100) wafer surface modified by the present interfacial mol. design and lamination technique.

ACCESSION NUMBER: 2001:146567 CAPLUS  
 DOCUMENT NUMBER: 134:340803  
 TITLE: Thermal Imidization of Fluorinated Poly(amic acid)s on Si(100) Surfaces Modified by Plasma Polymerization and Deposition of Glycidyl Methacrylate  
 AUTHOR(S): Zhang, Yan; Tan, K. L.; Liaw, B. Y.; Liaw, D. J.; Kang, E. T.; Neoh, K. G.  
 CORPORATE SOURCE: Department of Physics, National University of Singapore, 119260, Singapore  
 SOURCE: Langmuir (2001), 17(7), 2265-2274  
 CODEN: LANGD5; ISSN: 0743-7463  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 176315-62-1  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process) (thermal imidization of fluorinated poly(amic acid)s on Si(100) surfaces modified by plasma polymerization and deposition of glycidyl methacrylate)  
 RN 176315-62-1 CAPLUS  
 CN 1,3-Isobenzofurandione, 5,5'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3





CM 2

CRN 1107-00-2  
CMF C19 H6 F6 O6

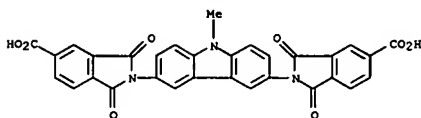
REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR  
THIS  
FORMAT RECORD. ALL CITATIONS AVAILABLE IN THE RE

L42 ANSWER 28 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
AB A new dicarboxylic acid monomer containing the N-methylcarbazole and imide structures, 3,6-bis(trimellitimido)-N-methylcarbazole (I), was prepared from the condensation of 3,6-diamino-N-methylcarbazole (c) and trimellitic anhydride. The diamine c was synthesized in three steps starting from the methylation of carbazole, followed by nitration and catalytic hydrazine reduction. A series of N-methylcarbazole-containing poly(amide-imide)s were synthesized by direct polycondensation from the diimide-diacid I with various aromatic diamines. These poly(amide-imide)s had inherent viscosities of 0.66-1.47 dL/g and were readily soluble in a variety of organic solvents, including N-methyl-2-pyrrolidone and N,N-dimethylacetamide (DMAc). Transparent, flexible, and tough films of these polymers could be cast from DMAc solns., and these films exhibited excellent mech. strength. The glass-transition temps. of these poly(amide-imide)s were in the range 317-362°C. All the poly(amide-imide) did not degrade noticeably below 480°C in nitrogen, and the 10% weight loss temps. and char yields at 800°C were above 520°C and 60% in nitrogen, resp., indicating high thermal stability.

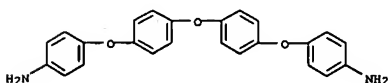
ACCESSION NUMBER: 2001:64509 CAPIUS  
DOCUMENT NUMBER: 134:266653  
TITLE: Synthesis and properties of poly(amide-imide)s containing a N-methylcarbazole group  
AUTHOR(S): Yang, C.-P.; Chen, R.-S.; Chang, C.-C.  
CORPORATE SOURCE: Department of Chemical Engineering, Tatung University,  
Taipei, 104, Taiwan  
SOURCE: Colloid and Polymer Science (2000), 278(11),  
1043-1051  
CODEN: CPMSB6; ISSN: 0303-402X  
PUBLISHER: Springer-Verlag  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
IT 331652-11-0P 331652-12-1P

RL: FRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(synthesis and properties of poly(amide-imide)s containing a N-methylcarbazole group)  
RN 331652-11-0 CAPIUS  
CN 1H-Isindole-5-carboxylic acid, 2,2'-(9-methyl-9H-carbazole-3,6-diyl)bis[2,3-dihydro-1,3-dioxo-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

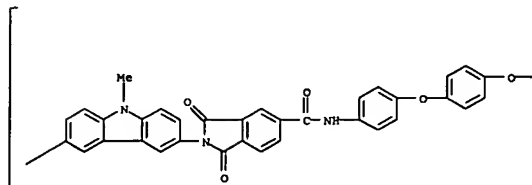
CRN 331651-96-8  
CMF C31 H17 N3 O8

CM 2

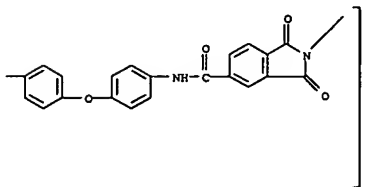
CRN 13080-88-1  
CMF C24 H20 N2 O3

RN 331652-12-1 CAPIUS  
CN Poly[(9-methyl-9H-carbazole-3,6-diyl)(1,3-dihydro-1,3-dioxo-2H-isindole-2,5-diyl)carbonylimino-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenyleneimino]carbonyl(1,3-dihydro-1,3-dioxo-2H-isindole-5,2-diyl)] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR  
THIS  
FORMAT RECORD. ALL CITATIONS AVAILABLE IN THE RE

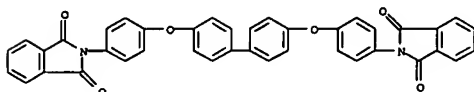
L42 ANSWER 29 OF 231 CAPLUS COPYRIGHT 2005 ACS ON STN  
 AB Resin compns. contain polyimides comprising 40-100 mol% 2,1  
 polyimide sulfone and 0-60 mol% 1 polyimide sulfone polysiloxane and  
 21 aromatic compound such as a bismaleimide. Thus, a composition  
 containing 100  
 parts 1,4-bis(4-aminophenoxy)benzene-1,3-bis(3-aminopropyl)-1,1,3,3-  
 tetramethyldisiloxane-3,3',4,4'-diphenyl sulfone tetracarboxylic acid  
 dianhydride copolymer, 30 parts bismaleimide prepared from  
 4,4'-bis(4-aminophenoxy)biphenyl and phthalic anhydride, and THF was used  
 to impregnate aromatic polyester nonwoven fabrics to prepare prepreps.  
 ACCESSION NUMBER: 2001:28981 CAPLUS  
 DOCUMENT NUMBER: 134:101929  
 TITLE: Resin compositions having low dielectric constants  
 and  
 circuit laminates  
 INVENTOR(S): Hashimoto, Takeshi  
 PATENT ASSIGNEE(S): Tomoe-gawa, Paper Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.  
 CODEN: JKKXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001006437	A2	20010112	JP 1999-171688	19990617
JP 3560501	B2	20040902		

PRIORITY APPLN. INFO.: JP 1999-171688 19990617

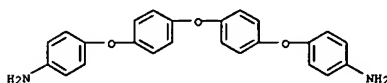
IT 319436-26-5P  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
 engineered material use); PREP (Preparation); USES (Uses)  
 (polyimide resin compns. having low dielec. const. for circuit  
 laminates)  
 RN 319436-26-5 CAPLUS  
 CN 1H-Isindole-1,3(2H)-dione, 2,2'-[1,1'-biphenyl]-4,4'-diylbis(oxy-4,1-  
 phenylene)]bis-, polymer with 4,4'-[oxybis(4,1-  
 phenyleneoxy)]bis[benzenamine], 5,5'-sulfonylbis[1,3-isobenzofurandione]  
 and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI)  
 (CA INDEX NAME)

CH 1  
 CRN 139299-39-1  
 CMF C40 H24 N2 O6

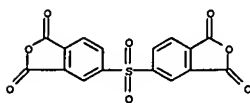


CH 2

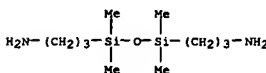
L42 ANSWER 29 OF 231 CAPLUS COPYRIGHT 2005 ACS ON STN (Continued)



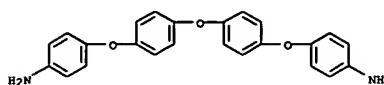
CH 2  
 CRN 2540-99-0  
 CMF C16 H6 O8 S



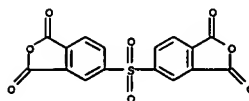
CH 3  
 CRN 2469-55-8  
 CMF C10 H28 N2 O S12



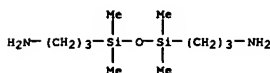
L42 ANSWER 29 OF 231 CAPLUS COPYRIGHT 2005 ACS ON STN (Continued)  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3



CH 3  
 CRN 2540-99-0  
 CMF C16 H6 O8 S



CH 4  
 CRN 2469-55-8  
 CMF C10 H28 N2 O S12



IT 189070-56-2P, Bis[4-(4-aminophenoxy)phenyl] ether-1,3-bis(3-  
 aminopropyl)-1,1,3,3-tetramethyldisiloxane-3,3',4,4'-diphenyl sulfone  
 tetracarboxylic acid dianhydride copolymer  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
 use); PREP (Preparation); USES (Uses)  
 (polyimide resin compns. having low dielec. const. for circuit  
 laminates)  
 RN 189070-56-2 CAPLUS  
 CN 1,3-Isobenzofurandione, 5,5'-sulfonylbis-, polymer with  
 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] and 3,3'-(1,1,3,3-  
 tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

CH 1  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3

L42 ANSWER 30 OF 231 CAPLUS COPYRIGHT 2005 ACS ON STN  
 AB The polyimides (A) are prepared by reacting a diamine monomer having four  
 benzene rings and both amino groups on the meta positions and an aromatic  
 tetracarboxylic dianhydride monomer first then adding one or two  
 dicarboxylic acid anhydride mols. with C.tplbond.C groups as terminal  
 blocking agents and finally heat-treating the precursor polyamic acids

(B)  
 at higher temperature Thus, reacting a mixture of 73.69 g 4,4'-bis(3-  
 aminophenoxy)biphenyl and 55.49 g 3,3',4,4'-biphenyltetracarboxylic acid  
 anhydride in 302.38 g N-methylpyrrolidone at room temperature for 6 h  
 then  
 adding 1.24 g 2-(3,4-dicarboxyphenyl)-1-phenylacetylene anhydride and  
 0.74  
 g phthalic acid anhydride and reacting for another 12 h gave a B with  
 logarithmic viscosity of 0.51 dL/g and finally heating B solution at  
 100°, 200° and 250° for 1 h resp. gave an A with  
 adhesive strength of 2.20 kg/cm and good heat resistance.

ACCESSION NUMBER: 2000:635095 CAPLUS  
 DOCUMENT NUMBER: 133:239048  
 TITLE: Thermoplastic polyimide heat-resistant adhesives  
 containing crosslinkable acetylene terminal groups  
 INVENTOR(S): Ohkawa, Yuichi; Sakata, Yoshihiro; Okumura, Tomomi;  
 Shibuya, Atsushi; Kuroki, Takeshi; Ohkawa, Hideaki  
 PATENT ASSIGNEE(S): Mitsui Chemical Industry Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 34 pp.  
 CODEN: JKKXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000248252	A2	20000912	JP 1999-101106	19990408

PRIORITY APPLN. INFO.: JP 1998-374652 A 19981228

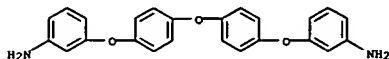
IT 181709-29-5DP, Bis[4-(3-aminophenoxy)phenyl]ether-1,4-bis(3,4-  
 dicarboxyphenoxy)benzene dianhydride copolymer, reaction product with  
 dicarboxyphenyl acetylene anhydride compds. and phthalic acid anhydride  
 292857-32-ODP, Bis[4-(3-aminophenoxy)phenyl]ether-2,2-bis(3,4-  
 dicarboxyphenyl)hexafluoropropane dianhydride copolymer, reaction product  
 with dicarboxyphenyl acetylene anhydride compds. and phthalic acid  
 anhydride 292857-37-SDP, Bis[4-(3-aminophenoxy)phenyl]ether-2,2-  
 bis[3,4-dicarboxyphenoxy)phenyl]propane dianhydride copolymer, reaction  
 product with dicarboxyphenyl acetylene anhydride compds. and phthalic  
 acid  
 anhydride 292857-41-IDP, Bis[4-(3-aminophenoxy)phenyl]ether-  
 bis(3,4-dicarboxyphenyl)sulfide dianhydride copolymer, reaction product  
 with dicarboxyphenyl acetylene anhydride compds. and phthalic acid  
 anhydride 292857-66-ODP, 3,3',4,4'-Benzophenonetetracarboxylic  
 dianhydride-bis[4-(3-aminophenoxy)phenyl]ether-3,3'-diaminobiphenyl  
 sulfone copolymer, reaction product with dicarboxyphenyl acetylene  
 anhydride compds. and phthalic acid anhydride  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
 engineered material use); PREP (Preparation); USES (Uses)  
 (thermoplastic polyimide heat-resistant adhesives containing  
 crosslinkable  
 acetylene terminal groups)

RN 181709-29-5 CAPLUS  
 CN 1,3-Isobenzofurandione, 5,5'-[1,4-phenylenebis(oxy)]bis-, polymer with

L42 ANSWER 30 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)  
3,3'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

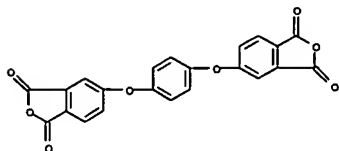
CM 1

CRN 58883-55-9  
CMF C24 H20 N2 O3



CM 2

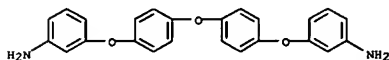
CRN 17828-53-4  
CMF C22 H10 O8



RN 292857-32-0 CAPLUS  
CN 1,3-Isobenzofurandione, 5,5'-(2,2,2-trifluoro-1-(trifluoromethyl)ethylidene)bis-, polymer with 3,3'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 58883-55-9  
CMF C24 H20 N2 O3

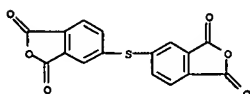


CM 2

CRN 1107-00-2  
CMF C19 H6 F6 O6

L42 ANSWER 30 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

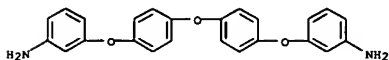
CRN 25884-43-9  
CMF C16 H6 O6 S



RN 292857-66-0 CAPLUS  
CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with 3,3'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] and 3,3'-sulfonylbis[benzenamine] (9CI) (CA INDEX NAME)

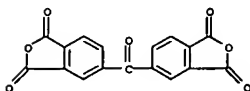
CM 1

CRN 58883-55-9  
CMF C24 H20 N2 O3



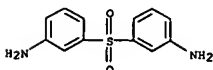
CM 2

CRN 2421-28-5  
CMF C17 H6 O7

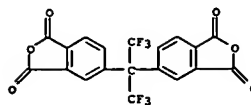


CM 3

CRN 599-61-1  
CMF C12 H12 N2 O2 S



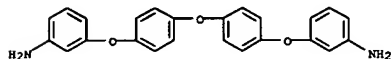
L42 ANSWER 30 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 292857-37-5 CAPLUS  
CN 1,3-Isobenzofurandione, 5,5'-(1-methylethylidene)bis-, polymer with 3,3'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

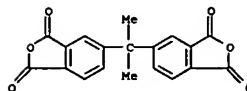
CM 1

CRN 58883-55-9  
CMF C24 H20 N2 O3



CM 2

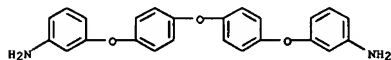
CRN 1779-17-5  
CMF C19 H12 O6



RN 292857-41-1 CAPLUS  
CN 1,3-Isobenzofurandione, 5,5'-thiobis-, polymer with 3,3'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 58883-55-9  
CMF C24 H20 N2 O3



CM 2

L42 ANSWER 30 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

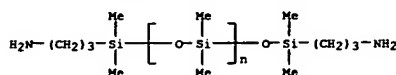
L42 ANSWER 31 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB The sheets comprise a porous substrate in the middle and 2 adhesive layers on surfaces where the sheets have modulus at 250° (M250) of <10 MPa and modulus at -80° (M-80) of <2000 MPa for lowering the heat stress of assemblies containing them. Claimed adhesives for the surfaces are polyimide-polysiloxanes based on the tetracarboxylic acid or anhydride compds. of bisphenol A, bisphenol S, bisphenol AF, benzophenone, di-Ph ether or/and biphenyl, and amino group-terminated di-Me polysiloxanes and other diamines. Thus, coating a varnish of a polyimide-polysiloxane having units derived from bisphenol S tetracarboxylic acid or anhydride, aminopropyltrimethylsilyl-terminated dimethylsiloxane and 4,4'-di(p-aminophenoxy)diphenyl ether in N-methyl-2-pyrrolidone on a release-coated Kapton H (polyimide) film to 25 µm thick, drying at 200°, transferring the resulting coated varnish layers on 2 sides of a PTFE porous film (porosity 80%) and pressing at 180° and 2 kg/cm<sup>2</sup> gave a thermal adhesive sheet which produced a lamination bond on test circuit board with M250 5 MPa, M-80 1500 MPa, warp 6 µm, adhesion strength after a pressure cooking test 500 kg/10 mm, and chip crack count 0/10.

ACCESSION NUMBER: 2000:529659 CAPLUS  
 DOCUMENT NUMBER: 133:151621  
 TITLE: Thermal adhesive sheets with low heat stress for bonding semiconductor devices and circuit boards  
 INVENTOR(S): Mizobe, Keizo  
 PATENT ASSIGNEE(S): Nitto Denko Corp., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.  
 CODEN: JKKOJAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

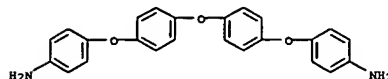
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000212518	A2	20000802	JP 1999-17599	19990126
PRIORITY APPLN. INFO.:			JP 1999-17599	19990126

IT 287386-88-3P  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (adhesives; thermal adhesive sheets with low heat stress for bonding semiconductor devices and circuit boards)  
 RN 287386-88-3 CAPLUS  
 CN 1,3-Isobenzofurandione, 5,5'-sulfonylbis-, polymer with α-[(3-aminopropyl)dimethylsilyl]-ω-[[[(3-aminopropyl)dimethylsilyl]oxy]poly[oxy(dimethylsilylene)] and 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 97917-34-5  
 CMF (C2 H6 O Si)n C10 H28 N2 O Si2  
 CCI PMS

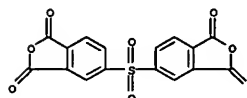
L42 ANSWER 31 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



CM 2  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3

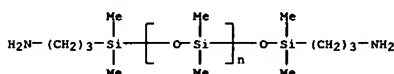


CM 3  
 CRN 2540-99-0  
 CMF C16 H6 O8 S

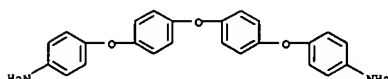


IT 287386-91-8P  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (thermal adhesive sheets with low heat stress for bonding semiconductor devices and circuit boards)  
 RN 287386-91-8 CAPLUS  
 CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with α-[(3-aminopropyl)dimethylsilyl]-ω-[[[(3-aminopropyl)dimethylsilyl]oxy]poly[oxy(dimethylsilylene)] and 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 97917-34-5  
 CMF (C2 H6 O Si)n C10 H28 N2 O Si2  
 CCI PMS

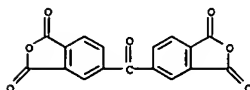
L42 ANSWER 31 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



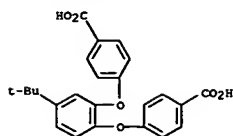
CM 2  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3



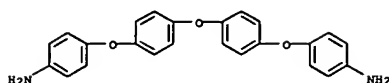
CM 3  
 CRN 2421-28-5  
 CMF C17 H6 O7



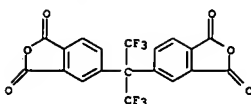
L42 ANSWER 32 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB 4-Tert-Butyl-1,2-bis(4-carboxyphenoxy)benzene (2a) and 1,2-bis(4-aminophenoxy)-4-tert-butylbenzene (2b) were synthesized through the aromatic nucleophilic substitution reaction of 4-tert-butylcatechol with p-fluorobenzonitrile or p-chloronitrobenzene in the presence of potassium carbonate in N,N-dimethylformamide. Two series of polyamides with flexible main-chain ether linkages and ortho-phenylene units were prepared from dicarboxylic acid 2a with various aromatic diamines or from diamine 2b with various aromatic dicarboxylic acids via the phosphorylation reaction with tri-Ph phosphite and pyridine. The inherent viscosities of these new polyamides were in the range of 0.52-2.60 dL g<sup>-1</sup>. Almost all the polyamides were noncryst. and readily soluble in a variety of polar solvents and afforded transparent, flexible and tough films by solution casting. They have useful levels of thermal stability, associated with relatively high glass transition temps. (most > 200°) and 10% weight loss temps. in excess of 480°C in nitrogen or in air.  
 ACCESSION NUMBER: 2000:398644 CAPLUS  
 DOCUMENT NUMBER: 133:120765  
 TITLE: Synthesis and properties of ortho-linked polyamides based on a bis(ether-carboxylic acid) or a bis(ether amine) derived from 4-tert-butylcatechol  
 AUTHOR(S): Hsiao, Sheng-Huei; Yang, Chin-Ping; Chen, Shin-Hung  
 CORPORATE SOURCE: Department of Chemical Engineering, Tatung University,  
 SOURCE: Polymer (2000), 41(17), 6537-6551  
 CODEN: POLMAG; ISSN: 0032-3861  
 PUBLISHER: Elsevier Science Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 285989-02-8P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (ortho-linked polyamides based on bis(ether-carboxylic acid) or bis(ether amine) derived from 4-tert-butylcatechol)  
 RN 285989-02-8 CAPLUS  
 CN Benzoic acid, 4,4'-[[4-(1,1-dimethylethyl)-1,2-phenylene]bis(oxy)]bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 187088-67-1  
 CMF C24 H22 O6



CH 2

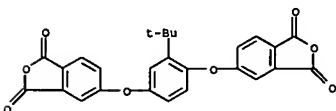
CRN 13080-88-1  
CMF C24 H20 N2 O3

REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT

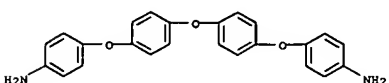


RN 248956-09-4 CAPLUS  
CN 1,3-Isobenzofurandione, 5,5'-[2-[(1,1-dimethylethyl)-1,4-phenylene]bis(oxy)]bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CH 1

CRN 248955-92-2  
CMF C26 H18 O8

CH 2

CRN 13080-88-1  
CMF C24 H20 N2 O3

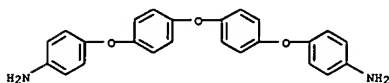
REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT

L42 ANSWER 33 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
AB High molar-mass poly(ether imide)s were obtained from 1,4-bis(3,4-dicarboxyphenoxy)-2-tert-butylbenzene dianhydride and aromatic amines. These polymers are characterized by high solubility even in the fully imidized form, good film-forming ability, high transparency, a wide temperature range between Tg and decomposition temperature, and good thermal stability together with good mech. properties.

ACCESSION NUMBER: 2000:185599 CAPLUS  
DOCUMENT NUMBER: 132:322383  
TITLE: Organosoluble optically transparent poly(ether imide)s based on a tert-butylhydroquinone bis(ether anhydride)  
AUTHOR(S): Yang, Chin-Ping; Hsiao, Sheng-Huei; Yang, Huei-Wen  
CORPORATE SOURCE: Department of Chemical Engineering, Tatung University,  
SOURCE: Taipei, 104, Taiwan  
Macromolecular Chemistry and Physics (2000), 201(4), 409-418  
CODEN: MCHPES; ISSN: 1022-1352  
PUBLISHER: Wiley-VCH Verlag GmbH  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
IT 176315-62-1P 248956-09-4P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (Organosol. optically transparent poly(ether imide)s based on tert-butylhydroquinone bis(ether anhydride))  
RN 176315-62-1 CAPLUS  
CN 1,3-Isobenzofurandione, 5,5'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CH 1

CRN 13080-88-1  
CMF C24 H20 N2 O3

CH 2

CRN 1107-00-2  
CMF C19 H6 F6 O6

L42 ANSWER 34 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
AB The polyimides comprise the backbone structure of any of various known thermoplastic polyimides and bear crosslinkable groups in their structure.

The polyimides are significantly superior in heat resistance, chemical resistance, and mech. properties to the known polyimides while retaining the intact moldability, sliding properties, low water absorption, elec. properties, thermal oxidative stability, and radiation resistance which are characteristic of the known polyimide structures. Examples of the polyimides include those derived from tetracarboxylic anhydrides with diamino ether compds., aromatic diamines containing ketone, sulfone or/and

sulfide groups, and modified with, e.g., acetylene groups.  
ACCESSION NUMBER: 2000:117108 CAPLUS  
DOCUMENT NUMBER: 132:152356  
TITLE: Aromatic polyimides containing crosslinkable groups and process for their producing  
INVENTOR(S): Shibuya, Atsushi; Okumura, Tomomi; Oikawa, Hideaki; Sakata, Yoshihiro; Kuroki, Takashi; Okawa, Yuichi; Tamai, Shoji  
PATENT ASSIGNEE(S): Mitsui Chemicals, Incorporated, Japan  
SOURCE: PCT Int. Appl., 190 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

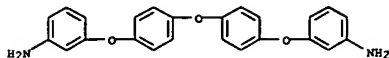
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000008090	A1	20000217	WO 1999-JP4273	19990806
W: US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
JP 200034888	A2	20001212	JP 1999-224643	19990806
EP 1148078	A1	20011024	EP 1999-935094	19990806
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
US 6531568	B1	20030311	US 2001-762260	20010409
PRIORITY APPLN. INFO.:			JP 1998-223362	A 19980806
			JP 1998-278807	A 19980930
			JP 1998-278808	A 19980930
			JP 1999-90454	A 19990331
			JP 1999-90455	A 19990331
			WO 1999-JP4273	W 19990806

IT 181709-21-7DP, reaction products with reactive end-capping agent mixture  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (aromatic polyimides containing crosslinkable groups and process for producing)  
RN 181709-21-7 CAPLUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 3,3'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

L42 ANSWER 34 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

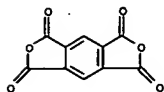
CM 1

CRN 58883-55-9  
CMF C24 H20 N2 O3



CM 2

CRN 89-32-7  
CMF C10 H2 O6



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT

L42 ANSWER 35 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
AB Oligomers of 1,4-phenylene oxides were synthesized by coupling of substituted phenols and aryl bromides in the presence of CuCl. The chain length varies from 2 to 5 Ph rings functionalized at one end by an OH and OMe group and at the other end by an OH, OMe or NO2 group. Methods for chemoselective demethylation of methoxy groups were developed.

ACCESSION NUMBER: 2000:116200 CAPLUS

DOCUMENT NUMBER: 132:264927

TITLE: Synthesis of functionalized para-phenylene oxide oligomers

AUTHOR(S): Wang, Leyong; Xi, Haitao; Sun, Xiaoliang; Shen, Yingzhong; Yang, Yang; Pan, Yi; Hu, Hongwen

CORPORATE SOURCE: Department of Chemistry, Nanjing University, Nanjing, 210093, Peop. Rep. China

SOURCE: Synthetic Communications (2000), 30(2), 227-234

CODEN: SYNCAV; ISSN: 0039-7911

PUBLISHER: Marcel Dekker, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 132:264927

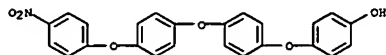
IT 263253-98-1P 263253-99-2P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of phenylene oxide oligomers)

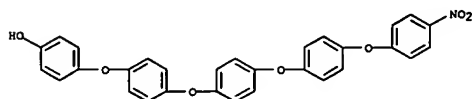
RN 263253-98-1 CAPLUS

CN Phenol, 4-[4-[4-(4-nitrophenoxy)phenoxy]phenoxy]- (9CI) (CA INDEX NAME)



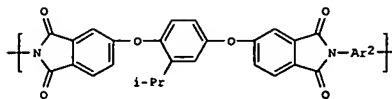
RN 263253-99-2 CAPLUS

CN Phenol, 4-[4-[4-(4-nitrophenoxy)phenoxy]phenoxy]phenoxy]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT

L42 ANSWER 36 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
GI



AB Title solns. contain the aromatic polyether-polyimides having tert-Bu-containing structural repeating units I (Ar2 = aromatic substituent) and organic solvents selected from NMP, DMAc, DMF, DMSO, m-cresol, pyridine, chloromethane, and chloroethane. Thus, 1,4-bis(3,4-dicarboxyphenoxy)-2-tert-butylbenzene dianhydride and 1,4-bis(4-aminophenoxy)benzene were treated, dissolved in DMAc, and applied to give a colorless film showing tensile strength 102 MPa, tensile elongation 25%, and initial modulus 2.5 GPa.

ACCESSION NUMBER: 2000:89400 CAPLUS

DOCUMENT NUMBER: 132:123825

TITLE: Colorless and organic solvent-soluble polyether-polyimides, their organic solvent solutions and films, and bis(ether anhydrides) as raw materials

INVENTOR(S): Yang, Chin Ping; Siao, Sheng Hui

PATENT ASSIGNEE(S): National Science Committee, Taiwan

SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKXKXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000038506	A2	20000208	JP 1999-198211	19990712
JP 3027383	B2	20000404		
TW 396178	B	20000701	TW 1998-87111239	19980710
			TW 1998-87111239	A 19980710

PRIORITY APPLM. INFO.:

IT 248956-09-4P  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(colorless and organic solvent-soluble polyether-polyimides prepared from

tert-Bu-containing bis(ether anhydrides) for films)

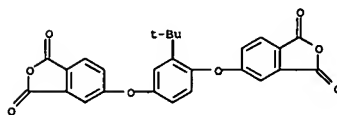
RN 248956-09-4 CAPLUS

CN 1,3-isobenzofurandione, 5,5'-[2-(1,1-dimethylethyl)-1,4-phenylene]bis(oxy)bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1

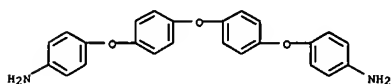
CRN 248955-92-2  
CMF C26 H18 O8

L42 ANSWER 36 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



CM 2

CRN 13080-88-1  
CMF C24 H20 N2 O3



L42 ANSWER 37 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN

AB The polyimide films comprise 21 heat-fusible polyimides selected from 6 Markush structures give in the document. The semiconductor devices

and the printed circuit boards using the films are also claimed. The polyimides can be bonded at 100-200° and give semiconductor devices with good crack and moisture resistance.

ACCESSION NUMBER: 2000:59169 CAPLUS

DOCUMENT NUMBER: 132:116122

TITLE: Heat-fusible polyimide films and semiconductor devices

INVENTOR(S): and multilayer printed circuit boards using them  
Tanigawa, Satoshi; Fujii, Hirofumi; Yoshio, Nobuhiko  
PATENT ASSIGNEE(S): Mitto Denko Corp., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 26 pp.

CODEN: JQOQAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000026602	A2	20000125	JP 1998-191941	19980707
PRIORITY APPLM. INFO.:			JP 1998-191941	19980707

IT 255915-63-0P, Bis[4-(4-aminophenoxy)phenyl] ether-bis(3-aminopropyl)tetramethyldisiloxane-bis(3,4-dicarboxyphenyl)sulfone dianhydride-1,12-diaminododecane copolymer  
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (low-temperature heat-fusible polyimide films for semiconductor devices and printed circuit boards)

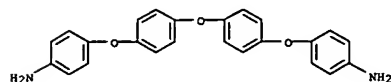
RN 255915-63-0 CAPLUS  
CN 1,3-isobenzofurandione, 5,5'-sulfonylbis-, polymer with 1,12-dodecanediamine, 4,4'-(oxybis(4,1-phenyleneoxy))bis(benzenamine) and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediy)bis(1-propanamine) (9CI)

(CA INDEX NAME)

CH 1

CRN 13080-88-1

CMF C24 H20 N2 O3



CH 2

CRN 2783-17-7

CMF C12 H28 N2

L42 ANSWER 38 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN

AB An adhesive tape for electronic parts comprises a metal plate and, on at least one side of the metal plate, three laminated polyimide adhesive layers, where the metal-contacting polyimide layer has the highest Tg and outmost layer of the polyimide has the lowest Tg. Thus a 145-μm adhesive tape was prepared by applying on a 100-μm copper plate a first layer (20 μm) of adhesive varnish of a polyimide prepared from 4,4'-diamino-3,3',5,5'-tetraethyldiphenylmethane, 3,3',4,4'-diphenylsulfone tetracarboxylic dianhydride, and pyromellitic anhydride

in a molar ratio of 100:25:75, a second layer of adhesive (20 μm) prepared from 4,4'-diamino-3,3',5,5'-tetraethyldiphenylmethane, 1,3-bis(3-aminopropyl)-1,1,3,3-tetramethyldisiloxane, and 3,3',4,4'-diphenylsulfone tetracarboxylic dianhydride in a molar ratio of 25:25:50, and a third layer of adhesive (5 μm) prepared from 2,2-bis[4-(4-aminophenoxy)phenyl]propane, a aminopropyltrimethylsilyl-terminated polydimethylsiloxane, and 3,3',4,4'-diphenylsulfone tetracarboxylic dianhydride in a molar ratio of 72:28:100.

ACCESSION NUMBER: 2000:23905 CAPLUS

DOCUMENT NUMBER: 132:94339

TITLE: Pressure-sensitive adhesive tapes for electronic parts

INVENTOR(S): Oka, Osamu; Tochihiro, Osamu; Komagata, Ayanori  
Tomoe-gawa Paper Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 22 pp.

CODEN: JQOQAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000098020	A2	20000111	JP 1998-180515	19980626
JP 3430020	B2	20030728		
PRIORITY APPLM. INFO.:			JP 1998-180515	19980626

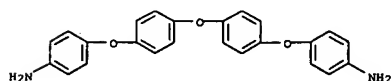
IT 189070-56-2P  
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses) (pressure-sensitive adhesive tapes for electronic parts)

RN 189070-56-2 CAPLUS  
CN 1,3-isobenzofurandione, 5,5'-sulfonylbis-, polymer with 4,4'-(oxybis(4,1-phenyleneoxy))bis(benzenamine) and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediy)bis(1-propanamine) (9CI) (CA INDEX NAME)

CH 1

CRN 13080-88-1

CMF C24 H20 N2 O3



L42 ANSWER 37 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN

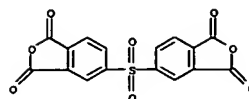
(Continued)

H<sub>2</sub>N-(CH<sub>2</sub>)<sub>12</sub>-NH<sub>2</sub>

CH 3

CRN 2540-99-0

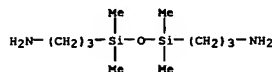
CMF C16 H6 O8 S



CH 4

CRN 2469-55-8

CMF C10 H28 N2 O S12



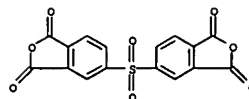
L42 ANSWER 38 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN

(Continued)

CH 2

CRN 2540-99-0

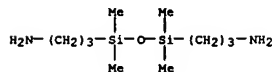
CMF C16 H6 O8 S



CH 3

CRN 2469-55-8

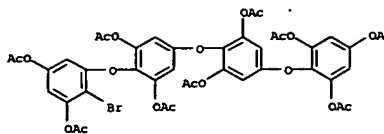
CMF C10 H28 N2 O S12



\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB From an Et acetate fraction of the brown alga *Cystophora retroflexa* several halogenated phlorotannins were isolated. Most of the compds. are derivs. of diphlorethol pentaacetate and triphlorethol-A heptaacetate. The majority were chlorinated and/or brominated. Only one iodinated substance, 2-iodophloroglucinol triacetate, was isolated. The structure of this derivative and the following compds. have been characterized previously: 2[D]-bromodiphlorethol pentaacetate, 3[Al]-bromodiphlorethol pentaacetate, 4[D]-bromodiphlorethol pentaacetate, 4[D]-chlorodiphlorethol pentaacetate, 3[Al]-chlorotriphlorethol-A heptaacetate, 4[D]-bromotriphlorethol-A heptaacetate and 4[D]-chlorobisfucopentaphlorethol-A nonadecaacetate. Ten halogenated phlorethols and two chlorinated fucophlorethols are described for the first time and characterized as their acetates: 2[B]-bromotriphlorethol-A heptaacetate (I), 2[D]-bromotriphlorethol-A heptaacetate, 2[B], 2[D]-dibromotriphlorethol-A heptaacetate, 3[Al], 5[Al]-dichlorotriphlorethol-A heptaacetate (II), 3[Al], 4[D]-dichlorotriphlorethol-A heptaacetate, 2[B], 4[D]-dichlorotriphlorethol-A heptaacetate, 2[D], 3[Al]-dibromotriphlorethol-A heptaacetate, 3[Al]-bromo-2[D]-chlorotriphlorethol-A heptaacetate, 2[D]-bromotetraphlorethol-C nonaacetate, 4[D]-chlorofucotriphlorethol-B dodecaacetate (III) and 4[D]-chlorofucotriphlorethol-B dodecaacetate (IV).

ACCESSION NUMBER: 1999:707495 CAPLUS  
DOCUMENT NUMBER: 132:134417  
TITLE: Halogenated phlorethols and fucophlorethols from the brown alga *Cystophora retroflexa*  
AUTHOR(S): Sailler, Birgit; Glombitza, Karl-Werner  
CORPORATE SOURCE: Institut für Pharmazeutische Biologie, Bonn, D-53115, Germany  
SOURCE: Natural Toxins (1999), 7(2), 57-62  
CODEN: NATOEE; ISSN: 1056-9014  
PUBLISHER: John Wiley & Sons Ltd.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
IT 256448-63-2  
RL: BOC (Biological occurrence); BSU (Biological study, unclassified);  
PRP (Properties); BIOL (Biological study); OCCU (Occurrence)  
RN 256448-63-2 CAPLUS  
CN 1,3,5-Benzenetriol, 2-[3,5-bis(acetyloxy)-4-[3,5-bis(acetyloxy)-4-[3,5-bis(acetyloxy)-2-bromophenoxy]phenoxy]phenoxy]-, triacetate (9CI) (CA INDEX NAME)



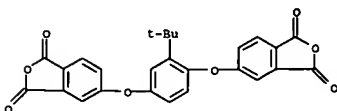
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT

AB Poly(ether-imide)s that are organic solvent-soluble and easily processable into colorless films are prepared from a dianhydride and a diamine, wherein the dianhydride is a bis(ether anhydride) having tert-Bu group, i.e. 1,4-bis(3,4-dicarboxyphenoxy)-2-tert-butylbenzene dianhydride (I; preparation given). Thus, the polymer of 1 mmol I and 1 mmol 2,5-bis(4-aminophenoxy)toluene was colorless and had inherent viscosity (0.5 g/100 mL dimethylacetamide; 30°) 1.07 dL/g, glass transition temperature 232°, and 10% weight loss in air at 505°.

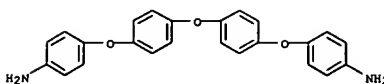
ACCESSION NUMBER: 1999:705033 CAPLUS  
DOCUMENT NUMBER: 131:337545  
TITLE: Colorless organic-soluble aromatic poly(ether-imide)s, their organic solutions and preparation, for transparent films  
INVENTOR(S): Yang, Chin-Ping; Hsiao, Sheng-Huei  
PATENT ASSIGNEE(S): National Science Council, Taiwan  
SOURCE: U.S., 25 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5977289	A	19991102	US 1998-135891	19980818
US 6060575	A	20000509	US 1999-300138	19990427
PRIORITY APPLN. INFO.:			US 1998-135891	A3 19980818

IT 248956-09-4P  
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)  
(colorless organic-soluble aromatic poly(ether-imide)s based on 1,4-bis(3,4-dicarboxyphenoxy)-2-tert-butylbenzene dianhydride for transparent films)  
RN 248956-09-4 CAPLUS  
CN 1,3-Isobenzofurandione, 5,5'-[2-[(1,1-dimethylethyl)-1,4-phenylene]bis(oxy)]bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)  
CH 1  
CRN 248955-92-2  
CMF C26 H18 O8



CM 2  
CRN 13080-88-1  
CMF C24 H20 N2 O3



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT



L42 ANSWER 41 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB Title polyamic acids are obtained by treating (A) diamine mixts. of (a) aromatic diamines H<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>OC<sub>6</sub>H<sub>4</sub>XC<sub>6</sub>H<sub>4</sub>OC<sub>6</sub>H<sub>4</sub>NH<sub>2</sub> [X = single bond, O, CO, S, SO<sub>2</sub>, CH<sub>2</sub>, CMe<sub>2</sub>, C(CF<sub>3</sub>)<sub>2</sub>], (b) ethylene glycol diamines H<sub>2</sub>N(CH<sub>2</sub>)<sub>m</sub>O(CH<sub>2</sub>CH<sub>2</sub>O)<sub>n</sub>(CH<sub>2</sub>)<sub>n</sub>NH<sub>2</sub> (m = 1-3; n = 0-3) and/or (c) methylenediamines H<sub>2</sub>N(CH<sub>2</sub>)<sub>k</sub>NH<sub>2</sub> (k = 2-12) at molar ratio a:(b + c) 1:0.05-1:1.0 and (B) ≥1 aromatic tetracarboxylic acid dianhydrides. Thus, 2,2-bis[4-(3-aminophenoxy)phenyl]propane, diethylene glycol bis(3-aminopropyl) ether, and bis(3,4-dicarboxyphenyl) ether dianhydride were polymerized to give a polyamic acid, which was cast on a glass sheet to give a polyimide film showing glass transition temperature 146° and 90°-peel strength 2.13 kg/cm for a Cu foil after hot pressing at 280° and 5 kg/cm<sup>2</sup> for 15 min.

ACCESSION NUMBER: 1999:665173 CAPLUS  
 DOCUMENT NUMBER: 131:287482  
 TITLE: Polyamic acids, polyimides, and heat-resistant adhesives, films, powders, and solutions using them  
 INVENTOR(S): Sakata, Yoshihiro; Okumura, Satomi; Shibuya, Atsushi; Kuroki, Takashi; Ohkawa, Yuichi; Oikawa, Hideaki  
 PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.  
 CODEN: JKOQAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

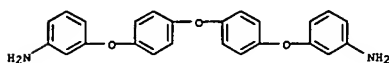
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11286547	A2	19991019	JP 1998-98623	19980410
PRIORITY APPL. INFO.:			JP 1998-25273	19980206

IT 246154-33-6DP, phthalic anhydride-terminated 246154-34-7DP, phthalic anhydride-terminated  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyamic acids and polyimides for heat-resistant adhesives, films, powders, and solns.)

RN 246154-33-6 CAPLUS  
 CH 1,3-isobenzofurandione, 5,5'-oxybis-, polymer with 3,3'-[oxybis(2,1-ethanediylloxy)]bis[1-propanamine] and 3,3'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

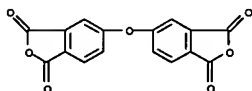
CH 1

CRN 58883-55-9  
 CHF C24 H20 N2 O3

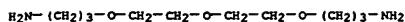


CH 2

L42 ANSWER 41 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

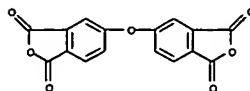


L42 ANSWER 41 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)  
 CRN 4246-51-9  
 CHF C10 H24 N2 O3



CH 3

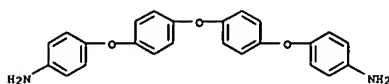
CRN 1823-59-2  
 CHF C16 H6 O7



RN 246154-34-7 CAPLUS  
 CH 1,3-isobenzofurandione, 5,5'-oxybis-, polymer with 3,3'-[oxybis(2,1-ethanediylloxy)]bis[1-propanamine] and 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

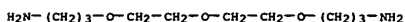
CH 1

CRN 13080-88-1  
 CHF C24 H20 N2 O3



CH 2

CRN 4246-51-9  
 CHF C10 H24 N2 O3



CH 3

CRN 1823-59-2  
 CHF C16 H6 O7

L42 ANSWER 42 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB A number of soluble organometallic polymers with pendent cyclopentadienyliron and pentamethylcyclopentadienylruthenium moieties were prepared under mild

exptl. conditions. These polyarom. materials contained ether, thioether and amine bridges. These polymeric materials were characterized using NMR, GPC and thermogravimetric anal. Photolytic demetallation of the organometallic polymers allowed for the isolation of the purely organic polymers in good yield.

ACCESSION NUMBER: 1999:559137 CAPLUS  
 DOCUMENT NUMBER: 132:237397  
 TITLE: Design of iron- and ruthenium- containing polymers  
 AUTHOR(S): Abd-El-Aziz, Alaa S.; Todd, Erin K.; De Denuis, Christine R.; Dembek, Alexa A.; Fagan, Paul J.  
 CORPORATE SOURCE: Department of Chemistry, The University of Winnipeg, Winnipeg, MB, R3B 2E9, Can.  
 SOURCE: Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (1999), 40(2), 926-927  
 CODEN: ACPPAY; ISSN: 0032-3934  
 PUBLISHER: American Chemical Society, Division of Polymer Chemistry  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

IT 261968-54-1P  
 RL: SPN (Synthetic preparation); PREP (Preparation) (preparation and characterization of)

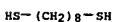
RN 261968-54-1 CAPLUS

CH Ruthenium(3+), {μ<sub>3</sub>-[η<sup>6</sup>:η<sup>6</sup>:η<sup>6</sup>-1,4-bis[4-(4-chlorophenoxy)phenoxy]benzene]]bis[(η<sup>5</sup>-2,4-cyclopentadien-1-yl)iron]}[(1,2,3,4,5-η)-1,2,3,4,5-pentamethyl-2,4-cyclopentadien-1-yl]-, tris[hexafluorophosphate(1-)], polymer with 1,8-octanedithiol (9CI)

(CA INDEX NAME)

CH 1

CRN 1191-62-4  
 CHF C8 H18 S2



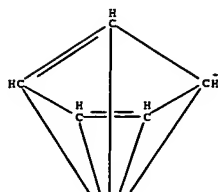
CH 2

CRN 261968-52-9  
 CHF C50 H45 Cl2 Fe2 O4 Ru . 3 F6 P

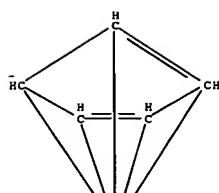
CH 3

CRN 261968-51-8  
 CHF C50 H45 Cl2 Fe2 O4 Ru  
 CCI CCS

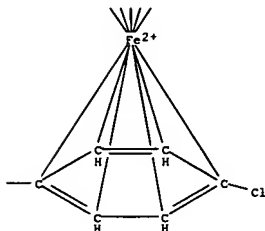
PAGE 1-A



PAGE 1-C

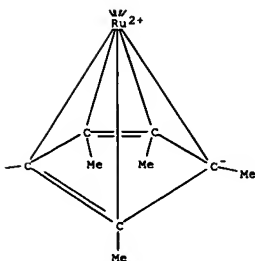


PAGE 2-C

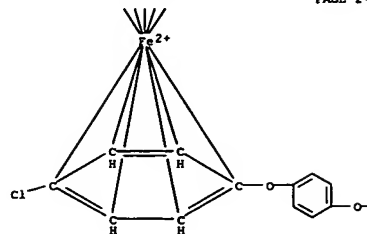


PAGE 3-A

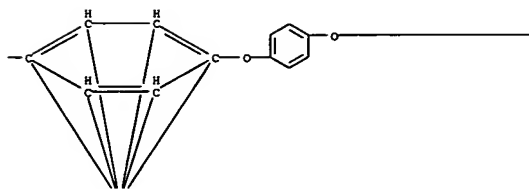
Me



PAGE 2-A



PAGE 2-B

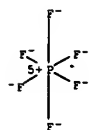


CM 4

CRN 16919-18-9

CMF F6 P

CCI CCS



IT 261968-52-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and polymerization with octanedithiol)

RN 261968-52-9 CAPLUS

CN Ruthenium(3+), {mu3-[eta6:eta6:eta6-1,4-bis[4-(4-chlorophenoxy)phenoxy]benzene]}bis[(eta5-2,4-cyclopentadien-1-yl)iron] [(1,2,3,4,5-n)-1,2,3,4,5-pentamethyl-2,4-cyclopentadien-1-yl]-, tris[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

CM 1

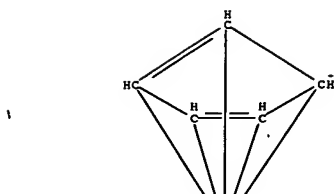
CRN 261968-51-8

CMF C50 H45 Cl2 Fe2 O4 Ru

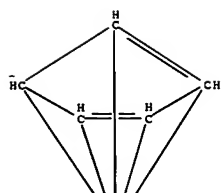
CCI CCS

PAGE 3-B

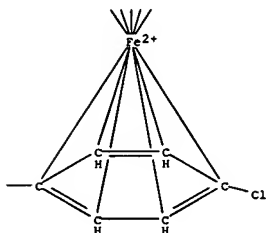
PAGE 1-A



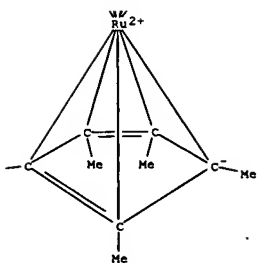
PAGE 1-C



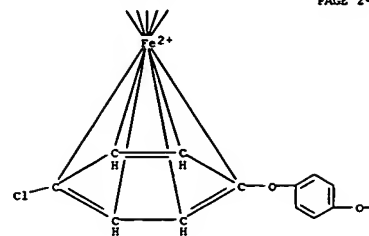
PAGE 2-C



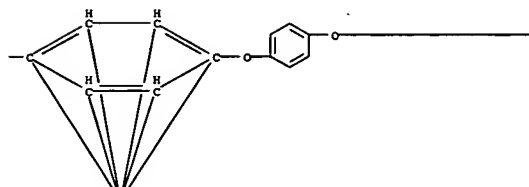
PAGE 3-A



PAGE 2-A



PAGE 2-B

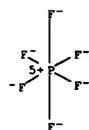


CM 2

CRN 16919-18-9

CMF F6 P

CCI CCS



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

Me-

PAGE 3-B

L42 ANSWER 43 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
AB The polyimide having excellent adhesion and heat resistance is prepared from

an aromatic diamine, a polysiloxane diamine, an aliphatic diamine, and a dianhydride. Thus 2,2-Bis[(3-aminophenoxy)phenyl]propane 11.4954, (3-aminopropyl)-terminated dimethylsiloxane (SY16-871) 0.994, ethylene glycol bis[3-aminopropyl]ether 1/7625, and 3,3',4,4'-biphenyltetracarboxylic dianhydride 11.2980 g were reacted to give a copolymer, showing Tg 169° and peel strength 2.78 kg/cm.

ACCESSION NUMBER: 1999:418048 CAPIUS  
DOCUMENT NUMBER: 131:74143  
TITLE: Polyimide prepared from aromatic, silyl and aliphatic diamines  
INVENTOR(S): Okawa, Yuichi; Sakata, Yoshihiro; Okumura, Satomi; Shibuya, Atsushi; Kuroki, Takashi; Oikawa, Hideaki  
PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 23 pp.  
CODEN: JQKQAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11181091	A2	19990706	JP 1997-358355	19971225

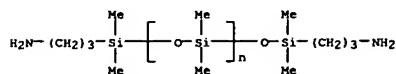
PRIORITY APPLN. INFO.: JP 1997-358355 19971225

IT 229161-45-9P 229161-50-6P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(polyimide prepared from aromatic, silyl and aliphatic diamines)

RN 229161-45-9 CAPIUS  
CH [5,5'-Bis(benzofuran)-1,1',3,3'-tetrone, polymer with  $\alpha$ -[(3-aminopropyl)dimethylsilyl]- $\omega$ -[[[(3-aminopropyl)dimethylsilyl]oxy]poly[oxy(dimethylsilylene)], 3,3'-[1,2-ethanediylbis(oxy)]bis[1-propanamine] and 3,3'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)]

CH 1

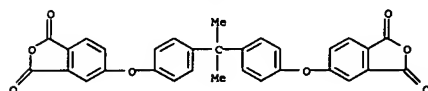
CRN 97917-34-5  
CMF [C2 H6 O Si]n C10 H28 N2 O Si2  
CCI FMS



CH 2

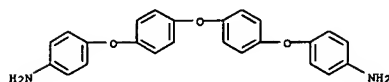
CRN 58883-55-9  
CMF C24 H20 N2 O3

L42 ANSWER 43 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)



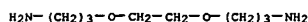
CH 3

CRN 13080-88-1  
CMF C24 H20 N2 O3

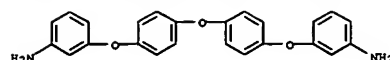


CH 4

CRN 2997-01-5  
CMF C8 H20 N2 O2

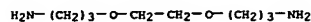


L42 ANSWER 43 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)



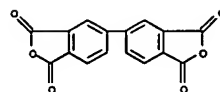
CH 3

CRN 2997-01-5  
CMF C8 H20 N2 O2



CH 4

CRN 2420-87-3  
CMF C16 H6 O6

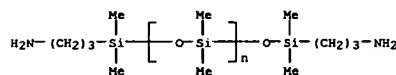


RN 229161-50-6 CAPIUS

CH 1,3-Isobenzofurandione, 5,5'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bis-, polymer with  $\alpha$ -[(3-aminopropyl)dimethylsilyl]- $\omega$ -[[[(3-aminopropyl)dimethylsilyl]oxy]poly[oxy(dimethylsilylene)], 3,3'-[1,2-ethanediylbis(oxy)]bis[1-propanamine] and 3,3'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)]

CH 1

CRN 97917-34-5  
CMF [C2 H6 O Si]n C10 H28 N2 O Si2  
CCI FMS



CH 2

CRN 38103-06-9  
CMF C31 H20 O8

L42 ANSWER 44 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN

AB Title device includes a tape having a circuit layer, a semiconductor element elec. connected to the tape, external terminals (for elec. connecting the element and a packaging substrate) on the tape, and an adhesive film comprising a thermosetting resin and a resin with low elasticity for bonding the tape and the element in elec. insulation. The device is manufactured by a process including (1) laminating the tape and the adhesive film, (2) laminating the adhesive film and the semiconductor element, (3) elec. connecting the circuit on the tape and the pad layer of the semiconductor element, (4) sealing the elec. connection by an elec. insulator, and (5) forming the external terminals on the tape. The adhesive film containing elastomers with low elasticity contributes to reduction of thermal stress, i.e., takes a roll as stress buffer layer. Thus, a 80:20 mixture of an epoxy resin and an acrylic rubber as the adhesive film was placed between a semiconductor element and a circuit tape then the laminate was pressed at 120° for 30 s and cured at 170° for 60 min. Then, after the pad layer of the semiconductor element and the connecting lead on the circuit tape was connected by single-point-bonding and the contact was sealed with an epoxy resin (RC 021C), solder balls (as terminals) were bonded on the tape to give title device showing no foaming

in the adhesive layer after 168-h moisture absorption at 85° and relative humidity 85% followed by heating at 245°.

ACCESSION NUMBER: 1999:231940 CAPIUS  
DOCUMENT NUMBER: 130:312909  
TITLE: Semiconductor device and packaging of the device using

adhesive film containing thermosetting resins and resins with low elasticity  
INVENTOR(S): Nagai, Akira; Ogino, Masahiko; Eguchi, Shuji; Segawa, Masanori; Ueno, Isao; Nishimura, Asao; Akiyama, Yukiharu; Miyazaki, Chuichi  
PATENT ASSIGNEE(S): Hitachi, Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
CODEN: JQKQAF

DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11097578	A2	19990409	JP 1997-256420	19970922

PRIORITY APPLN. INFO.: JP 1997-256420 19970922

IT 223480-28-2

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PROC (Process); USES (Uses) (semiconductor packaging materials and process using adhesive films comprising thermosetting resins and elastomers with low elasticity)

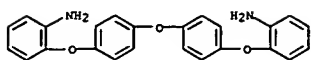
RN 223480-28-2 CAPIUS

CH 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, (1-methylethylidene)di-4,1-phenylene ester, polymer with 2,2'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)]

L42 ANSWER 44 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

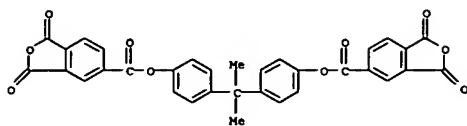
CH 1

CRN 223480-27-1  
CMF C24 H20 N2 O3



CH 2

CRN 2770-50-5  
CMF C33 H20 O10



L42 ANSWER 45 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN

AB Title tapes have adhesive layers containing 100 parts polyimides having 30-100

mol% sulfone- and/or ester-containing aromatic polyimide units and 0-70 mol% sulfone- and/or ester-containing polyimide-siloxane units and 0.1-15 parts

silane coupling agents at least on heat-resistant films. Thus, 3,4'-diaminobiphenyl 67, 1,3-bis(3-aminopropyl)-1,1,3,3-tetramethyldisiloxane 33, and 3,3',4,4'-diphenylsulfonetetracarboxylic dianhydride 100 mmol were polymerized, imidized, dried, and dissolved in

THF to obtain a 25% polyimide solution, 1 kg of which was mixed with 0.75 g 3-aminopropyltriethoxysilane, applied on one side of a polyimide film,

and dried to give an adhesive tape.

ACCESSION NUMBER: 1999:225904 CAPLUS

DOCUMENT NUMBER: 130:253480

TITLE: Polyimide adhesive tapes with good heat resistance for

INVENTOR(S): electronic parts  
Oka, Osamu; Nishigatani, Takeshi  
PATENT ASSIGNEE(S): Tomoeigawa Paper Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 23 pp.

DOCUMENT TYPE: CODEN: JVOXAF

LANGUAGE: Patent

FAMILY ACC. NUM. COUNT: 1 Japanese

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11092719	A2	19990406	JP 1997-251775	19970917
JP 3347651	B2	20021120		
TW 416114	B	20001221	TW 1998-87115413	19980916
PRIORITY APPLN. INFO.:			JP 1997-251775	A 19970917

IT 189070-56-2F, 4,4'-Bis(4-aminophenoxy)diphenyl ether-1,3-bis(3-aminopropyl)-1,1,3,3-tetramethyldisiloxane-3,3',4,4'-diphenylsulfonetetracarboxylic dianhydride copolymer 189070-69-7F, 4,4'-Bis(4-aminophenoxy)diphenyl ether-1,3-bis(3-aminopropyl)-1,1,3,3-tetramethyldisiloxane-ethylene glycol bistrimellitete dianhydride copolymer

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (heat-resistant polyimide-polysiloxane adhesive tapes containing

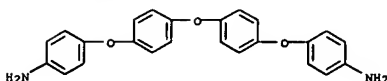
silane coupling agents for electronic parts)

RN 189070-56-2 CAPLUS  
CN 1,3-Isobenzofuran-5,5'-diylbis(4-aminophenoxy)-1,3-bis(3-aminopropyl)-1,1,3,3-tetramethyldisiloxane-3,3',4,4'-diphenylsulfonetetracarboxylic dianhydride copolymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanedyl)bis[1-propanamine] [9CI] (CA INDEX NAME)

CH 1

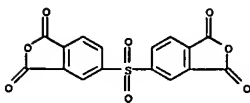
CRN 13080-88-1  
CMF C24 H20 N2 O3

L42 ANSWER 45 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



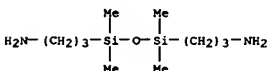
CH 2

CRN 2540-99-0  
CMF C16 H6 O8 S



CH 3

CRN 2469-55-8  
CMF C10 H28 N2 O Si2

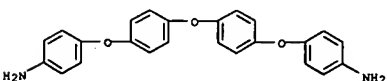


RN 189070-69-7 CAPLUS  
CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,2-ethenediyl ester, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanedyl)bis[1-propanamine] [9CI]

(CA INDEX NAME)

CH 1

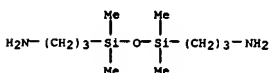
CRN 13080-88-1  
CMF C24 H20 N2 O3



L42 ANSWER 45 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

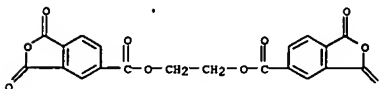
CH 2

CRN 2469-55-8  
CMF C10 H28 N2 O Si2



CH 3

CRN 1732-96-3  
CMF C20 H10 O10



L42 ANSWER 46 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB Title polyimides having 2,2',5,5',6,6'-hexafluorobiphenyl-3,3',4,4'-tetracarboxylic imide units are prepared Laminated boards have films of the polyimides with excellent heat resistance and low thermal expansion, dielec. constant, birefringence, and H<sub>2</sub>O absorption. Thus, p-phenylenediamine was treated with equimolar 2,2',5,5',6,6'-hexafluorobiphenyl-3,3',4,4'-tetracarboxylic acid dianhydride at a room temperature for 8 h in N-methyl-2-pyrrolidone to obtain a poly(amic acid) solution with logarithmic viscosity 0.40. It was applied on a glass sheet and then heated to give a film showing T<sub>g</sub> ≥450°, sp. inductive capacity 3.1 e, linear expansion coefficient 1.0, birefringence 0.00003 Δnxy, and water absorption 1.24%.

ACCESSION NUMBER: 1999:134401 CAPIUS  
 DOCUMENT NUMBER: 130:210630  
 TITLE: Fluorine-containing polyimides, laminated boards therefrom, and poly(amic acid) solutions therefor  
 INVENTOR(S): Yamamoto, Tomohiko; Tsumiyama, Tatsuo; Sugimoto, Koji  
 PATENT ASSIGNEE(S): Ube Industries, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JQOQAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11049855	A2	19990223	JP 1997-210606	19970803
US 6040418	A	20000321	US 1998-128665	19980804
			JP 1997-210606	19970805

PRIORITY APPLM. INFO.:

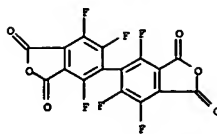
IT 220944-78-5P  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyimides having hexafluorobiphenyltetracarboximide group with good heat and water resistance and low thermal expansion, dielec. constant, and birefringence)

RN 220944-78-5 CAPIUS  
 CH [5,5'-Bis(isobenzofuran)-1,1',3,3'-tetrone, 4,4',6,6',7,7'-hexafluoro-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)]

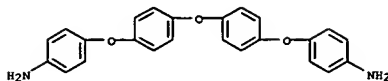
CM 1

CRN 23266-67-3  
 CMF C16 F6 O6

L42 ANSWER 46 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)



CM 2  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3



L42 ANSWER 47 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB Title adhesive tape comprises a metal plate, an adhesive layer containing an aromatic polyimide 20-100 mol% and polysulfone-polyimide 0-80 mol%, and another adhesive layer containing an aromatic polyimide 40-100 mol% and polysulfone-polyimide-polydimethylsiloxane 0-60 mol%, wherein the two adhesives have different glass transition temperature T<sub>g</sub>. Thus, on a copper plate of 50 μm thickness a polyimide adhesive from copolym. of 4,4'-diamino-3,3',5,5'-tetraethyldiphenylmethane 31.04 g, 3,3',4,4'-diphenylsulfone tetracarboxylic dianhydride 8.96 g, and pyromellitic anhydride 6.36 g (T<sub>g</sub> 400°) was coated with 20 μm thickness, followed by a 20 μm polyimide coat from copolym. of 4,4'-diamino-3,3',5,5'-tetraethyldiphenylmethane 7.76 g, 1,3-bis(3-aminopropyl)-1,1,3,3-tetramethyldisiloxane 6.21 g, 3,3',4,4'-diphenyl sulfone tetracarboxylic dianhydride 17.91 g (T<sub>g</sub> 186°) to give an adhesive tape, showing adhesion temperature of 310°.

ACCESSION NUMBER: 1999:104711 CAPIUS  
 DOCUMENT NUMBER: 130:183455  
 TITLE: Heat-resistant adhesive tape for electronic parts  
 INVENTOR(S): Oka, Osamu; Tochihira, Osamu; Komagata, Fuminori  
 PATENT ASSIGNEE(S): Tomoeagawa Paper Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 22 pp.  
 CODEN: JQOQAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11035902	A2	19990209	JP 1997-212442	19970723
JP 3347026	B2	20021120		
US 6132865	A	20001017	US 1998-118022	19980717
			JP 1997-212442	A 19970723

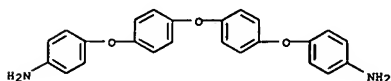
PRIORITY APPLM. INFO.:

IT 189070-56-2P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (heat-resistant adhesive tape for electronic parts)

RN 189070-56-2 CAPIUS  
 CH 1,3-bis(isobenzofurandione, 5,5'-sulfonylbis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediy)bis[1-propanamine] (9CI) (CA INDEX NAME)]

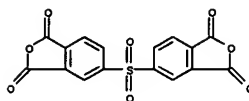
CM 1

CRN 13080-88-1  
 CMF C24 H20 N2 O3

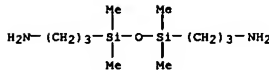


L42 ANSWER 47 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)

CM 2  
 CRN 2540-99-0  
 CMF C16 H6 O8 S



CM 3  
 CRN 2469-55-8  
 CMF C10 H28 N2 O 812



L42 ANSWER 48 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN

AB The process for manufacture of emitter, which has a conductive film and a polyimide film on a substrate, comprises the steps of: (1) forming a crevasse on the conductive film; (2) forming the polyamide acid layer on the crevasse; (3) converting the polyamide acid film to polyimide film by heating; and (4) charring near the crevasse by applying an elec. field to form an electron emitting part. The each electron emitters on an array shows same electron characteristics to form a high quality image.

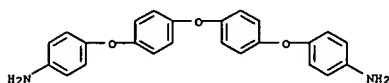
ACCESSION NUMBER: 1999:74519 CAPLUS  
DOCUMENT NUMBER: 130:160734  
TITLE: Process for manufacture of electron emitter and electron source for image forming device  
INVENTOR(S): Iwaori, Takashi  
PATENT ASSIGNEE(S): Canon K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 25 pp.  
CODEN: JTOGAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11025850	A2	19990129	JP 1997-174031	19970630
PRIORITY APPLN. INFO.:			JP 1997-174031	19970630

IT 72356-19-5, Bis[4-(4-aminophenoxy)phenyl]ether-3,3',4,4'-biphenyltetracarboxylic acid dianhydride copolymer  
RL: TEM (Technical or engineered material use); USES (Uses)  
(process of manufacture of electron emitter and electron source for image forming device)

RN 72356-19-5 CAPLUS  
CN [5,5'-Bis(sobenzofuran)-1,1',3,3'-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1  
CRN 13080-88-1  
CMF C24 H20 N2 O3



CM 2  
CRN 2420-87-3  
CMF C16 H6 O6

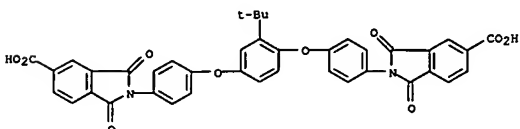
L42 ANSWER 49 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN

AB A diimide dicarboxylic acid, 1,4-bis[4-(trimellitimidophenoxy)-2-tert-butylbenzene (I), was prepared by the condensation of 1,4-bis[4-(aminophenoxy)-2-tert-butylbenzene (BAP-tBB) with 2 equivalent amts. of trimellitic anhydride (TMA). A series of novel poly(amide-imide)s (PAIs) having inherent viscosities of 0.98-1.51 dL g<sup>-1</sup> were prepared by the tri-Ph phosphite activated polycondensation of I with various aromatic diamines in a medium consisting of N-methyl-2-pyrrolidone (NMP), pyridine, and calcium chloride. Most of polymers show excellent solubility in amide-type solvents such as NMP and N,N-dimethylacetamide (DMAc) and formed tough, transparent, and flexible films by casting from DMAc solution. These films had tensile strengths of 71-106 MPa, elongations at break of 5-45%, and initial moduli of 2.1-2.9 GPa. Most PAIs necked during the tensile testing. The glass transition temps. of these polymers were in the range 228-286° and the 10% weight loss temps. were above 475° in air or in nitrogen.

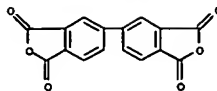
ACCESSION NUMBER: 1998:617567 CAPLUS  
DOCUMENT NUMBER: 129:302929  
TITLE: New poly(amide-imide) syntheses XXII. Synthesis and properties of poly(amide-imide)s based on 1,4-bis[4-(trimellitimidophenoxy)-2-tert-butylbenzene and aromatic diamines  
AUTHOR(S): Yang, Chin-Ping; Hsiao, Sheng-Huei; Yang, Hui-Wen  
CORPORATE SOURCE: Department of Chemical Engineering, Tatung Institute of Technology, Taipei, 104, Taiwan  
SOURCE: Polymer Journal (Tokyo) (1998), 30(9), 723-729  
CODEN: POLJBB; ISSN: 0032-3896  
PUBLISHER: Society of Polymer Science, Japan  
DOCUMENT TYPE: Journal  
LANGUAGE: English

IT 214333-49-0P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(synthesis and properties of poly(amide-imide)s based on 1,4-bis[4-(trimellitimidophenoxy)-2-tert-butylbenzene and aromatic diamines)  
RN 214333-49-0 CAPLUS  
CN 1H-isoindole-5-carboxylic acid, 2,2'-[[2-[(1,1-dimethylethyl)-1,4-phenylene]bis(oxy-4,1-phenylene)]bis[2,3-dihydro-1,3-dioxo-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1  
CRN 213817-31-3  
CMF C40 H28 N2 O10

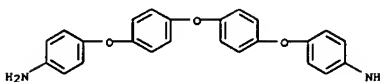


L42 ANSWER 48 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



L42 ANSWER 49 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

CM 2  
CRN 13080-88-1  
CMF C24 H20 N2 O3



REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L42 ANSWER 50 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB In tapes which are realized by lamination, in order, of 21 metal sheet, adhesive layer A, and adhesive layer B, the layers A and B contain 21 polyimide which consists of 40-100 mol% polyimide-polysulfone and polyester-polyimide repeating units and 0-60 mol% polyimide-polysulfone-siloxane and/or polyester-polyimide-siloxane repeating units, where each adhesive layer has different glass temperature. An adhesive tape had a layer of 1,3-bis(3-aminopropyl)-1,1,3,3-tetramethyldisiloxane-3,4'-diaminobiphenyl-3,3',4,4'-diphenylsulfonetetracarboxylic dianhydride copolymer and a layer of 1,3-bis(3-aminopropyl)-1,1,3,3-tetramethyldisiloxane-4,4'-diaminodiphenyl methane-3,3',4,4'-diphenylsulfonetetracarboxylic dianhydride copolymer on a copper substrate.

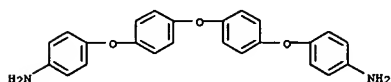
ACCESSION NUMBER: 1998:516338 CAPIUS  
 DOCUMENT NUMBER: 129:203932  
 TITLE: Polyimide-based adhesive tapes for electronic parts  
 INVENTOR(S): Oka, Osamu; Nishigaya, Takeshi; Tochihira, Osamu; Komagata, Fuminori  
 PATENT ASSIGNEE(S): Tomoe-gawa Paper Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 25 pp.  
 CODEN: JFOGAF  
 Patent  
 DOCUMENT TYPE: Japanese  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10212460	A2	19980811	JP 1997-29817	19970130
JP 3347632	B2	20021120		
US 6228452	B1	20010508	US 1998-15334	19980129
PRIORITY APPLN. INFO.:			JP 1997-29817	A 19970130

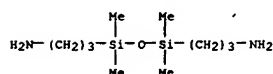
IT 189070-56-2P, 4,4'-Bis(4-aminophenoxy)diphenyl ether-1,3-bis(3-aminopropyl)-1,1,3,3-tetramethyldisiloxane-3,3',4,4'-diphenylsulfonetetracarboxylic dianhydride copolymer 189070-69-7P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyimide-based adhesive tapes for electronic parts)  
 RN 189070-56-2 CAPIUS  
 CH 1,3-Isobenzofurandione, 5,5'-sulfonylbis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanedyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

CH 1

CRN 13080-88-1  
 CMF C24 H20 N2 O3

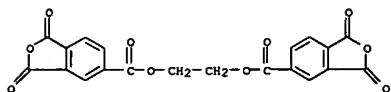


L42 ANSWER 50 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)



CH 3

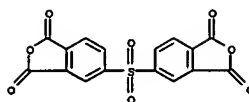
CRN 1732-96-3  
 CMF C20 H10 O10



L42 ANSWER 50 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)

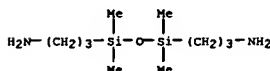
CH 2

CRN 2540-99-0  
 CMF C16 H6 O8 S



CH 3

CRN 2469-55-8  
 CMF C10 H28 N2 O S12

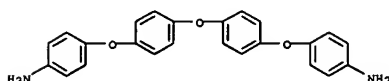


RN 189070-69-7 CAPIUS  
 CH 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,2-ethanediyl ester, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanedyl)bis[1-propanamine] (9CI)

(CA INDEX NAME)

CH 1

CRN 13080-88-1  
 CMF C24 H20 N2 O3



CH 2

CRN 2469-55-8  
 CMF C10 H28 N2 O S12

L42 ANSWER 51 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB The tapes have adhesive layers of polyimide containing 40-100 mol% repeating units containing sulfone- and/or ester groups and 0-60% repeating units containing siloxane and sulfone or ester groups on both sides of a substrate, where each adhesive layer has a different glass temperature. A polyimide film was coated with a 4,4'-Diamino-3,3',5,5'-tetraethyldiphenylmethane-3,3',4,4'-diphenylsulfone tetracarboxylic dianhydride copolymer on one side and a 1,3-Bis(3-aminopropyl)-1,1,3,3-tetramethyldisiloxane-3,3',4,4'-diphenylsulfone tetracarboxylic dianhydride-4,4'-oxydianiline copolymer to give an adhesive tape.

ACCESSION NUMBER: 1998:438436 CAPIUS  
 DOCUMENT NUMBER: 129:162479  
 TITLE: Polyimide adhesive tape for electronic parts  
 INVENTOR(S): Oka, Osamu; Nishigaya, Takeshi  
 PATENT ASSIGNEE(S): Tomoe-gawa Paper Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 23 pp.  
 CODEN: JFOGAF  
 Patent  
 DOCUMENT TYPE: Japanese  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

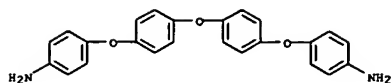
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10183079	A2	19980707	JP 1996-358155	19961226
TW 384304	B	20000311	TW 1997-86119347	19971219
US 6045886	A	20000404	US 1997-998019	19971224
PRIORITY APPLN. INFO.:			JP 1996-358155	A 19961226
			JP 1996-349558	A 19961227

IT 189070-56-2P, 4,4'-Bis(4-aminophenoxy)diphenyl ether-1,3-bis(3-aminopropyl)-1,1,3,3-tetramethyldisiloxane-3,3',4,4'-diphenylsulfone tetracarboxylic dianhydride copolymer 189070-69-7P, 4,4'-Bis(4-aminophenoxy)diphenyl ether-1,3-bis(3-aminopropyl)-1,1,3,3-tetramethyldisiloxane-ethylene glycol bistrimellitate dianhydride copolymer  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyimide adhesive tape for electronic parts)  
 RN 189070-56-2 CAPIUS  
 CH 1,3-Isobenzofurandione, 5,5'-sulfonylbis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanedyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

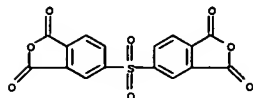
CH 1

CRN 13080-88-1  
 CMF C24 H20 N2 O3

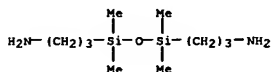




CM 2

CRN 2540-99-0  
CHF C16 H6 O8 S

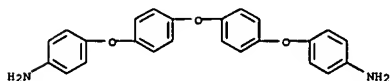
CM 3

CRN 2469-55-8  
CHF C10 H28 N2 O S12

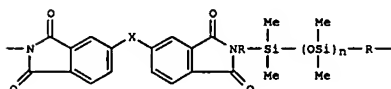
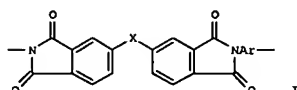
RN 189070-69-7 CAPLUS  
CH 5-isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,2-ethanediyl ester, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI)

(CA INDEX NAME)

CM 1

CRN 13080-88-1  
CHF C24 H20 N2 O3

GI



II

AB The adhesive tapes comprise a base layer sandwiched between 2 adhesive layers, and each of the 3 layers contains polyimides composed of 40-100 mol% structure repeating units I (X = bivalent aromatic group, e.g.

C6H4C6H4, C6H4OC6H4, C6H4CH2C6H4, C6H4SC6H4, C6H4SO2C6H4, C6H4CMe2C6H4, etc.; Z = SO2, CO2CH2CH2O2C) and 0-60 mol% structure repeating units I (X = RSiMe2(OSiMe2)nR; R = (CH2)mOC6H4 (the CH2 group is bonded to Si); m = 1-10; Z = same as above; n = 1-20). Among the 3 layers, the base layer shows the highest glass transition temperature (Tg). The tapes are used

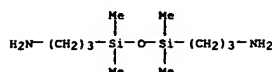
at a relatively low temperature. Thus, a PET film was coated with 67:33:100

mmol 4,4'-diaminodiphenylmethane-1,3-bis(3-aminopropyl)-1,1,3,3-tetramethyldisiloxane (II)-3,3',4,4'-diphenylsulfonetetracarboxylic dianhydride (III) copolymer (Tg 180°), 100:100 mmol 4,4'-diamino-3,3',5,5'-tetraethyldiphenylmethane-III copolymer (Tg 282°), and 67:33:100 mmol 1,3-bis[1-(4-aminophenyl)-1-methylethyl]benzene-II-III copolymer (Tg 160°) in this order to give an adhesive tape, which was applied to Cu plate to show adhesive strength 35-50 g/10 mm.

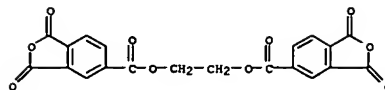
ACCESSION NUMBER: 1998:436126 CAPLUS  
DOCUMENT NUMBER: 129:137146  
TITLE: Heat-resistant laminated adhesive tapes containing polyimides for semiconductor devices  
INVENTOR(S): Oka, Osamu  
PATENT ASSIGNEE(S): Tomoeagawa Paper Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 25 pp.  
CODEN: JKOXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10183097	A2	19980707	JP 1996-349558	19961227

CM 2

CRN 2469-55-8  
CHF C10 H28 N2 O S12

CM 3

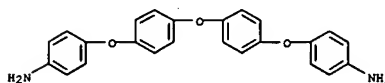
CRN 1732-96-3  
CHF C20 H10 O10

L42 ANSWER 52 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)  
TW 384304 B 20000311 TW 1997-86119347 19971219  
US 6045886 A 20000404 US 1997-998019 19971224  
PRIORITY APPLN. INFO.: JP 1996-358155 A 19961226  
JP 1996-349558 A 19961227

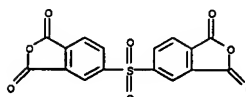
IT 189070-56-2P 189070-69-7P  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(heat-resistant laminated adhesive tapes containing polyimides for semiconductor devices)

RN 189070-56-2 CAPLUS  
CH 1,3-isobenzofurandione, 5,5'-sulfonylbis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

CM 1

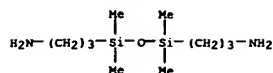
CRN 13080-88-1  
CHF C24 H20 N2 O3

CM 2

CRN 2540-99-0  
CHF C16 H6 O8 S

CM 3

CRN 2469-55-8  
CHF C10 H28 N2 O S12

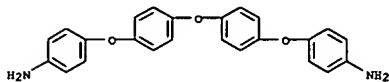


RN 189070-69-7 CAPIUS  
 CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,2-ethanediyl ester, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI)

(CA INDEX NAME)

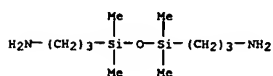
CM 1

CRN 13080-88-1  
 CMF C24 H20 N2 O3



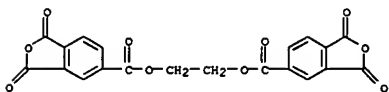
CM 2

CRN 2469-55-8  
 CMF C10 H28 N2 O Si2



CM 3

CRN 1732-96-3  
 CMF C20 H10 O10



AB The title tapes comprise a support layer and 2 adhesive layers having different Tg and containing polymers having 100-40 mol% polyimide units derived from 4,4'-sulfonylbis(phthalic anhydride)-type or ethylene glycol bistrimellitide dianhydride-type tetracarboxylic dianhydrides and an aromatic diamines and 0-60 mol% similar polyimide bearing di-Me siloxane groups. Thus, consecutively coating a polyimide having Tg 282° and derived from 4,4'-diamino-3,3',5,5'-tetraethyldiphenylmethane and 3,3',4,4'-diphenylsulfonetetracarboxylic acid dianhydride (I) and a polyimide-polyisiloxane having Tg 217° and derived from 4,4'-oxydianiline, 1,3-bis(3-aminopropyl)-1,1,3,3-tetramethyldisiloxane and I on the surface of a release-coated PET polyester film and heating gave an adhesive tape.

ACCESSION NUMBER: 1998:334824 CAPIUS  
 DOCUMENT NUMBER: 129:82570  
 TITLE: Relatively low-temperature workable polyimide-type adhesive tapes for mounting electronic parts  
 INVENTOR(S): Oka, Osamu  
 PATENT ASSIGNEE(S): Tomoe-gawa Paper Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 24 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10140106	A2	19980526	JP 1996-302599	19961114
TW 438875	B	20010607	TW 1997-86116337	19971104
PRIORITY APPLN. INFO.:			JP 1996-302599	A 19961114

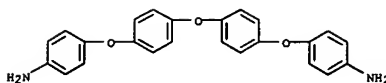
IT 189070-56-2P, 1,3-Bis(3-aminopropyl)-1,1,3,3-tetramethyldisiloxane-4,4'-bis(4-aminophenoxy)diphenyl ether-3,3',4,4'-diphenylsulfonetetracarboxylic dianhydride copolymer 189070-69-7P, 1,3-Bis(3-aminopropyl)-1,1,3,3-tetramethyldisiloxane-4,4'-bis(4-aminophenoxy)diphenyl ether-ethylene glycol bistrimellitide dianhydride copolymer

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (relatively low-temperature workable polyimide-siloxane-type adhesive tapes for mounting electronic parts)

RN 189070-56-2 CAPIUS  
 CN 1,3-Isobenzofurandione, 5,5'-sulfonylbis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

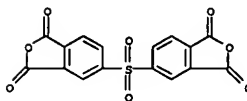
CM 1

CRN 13080-88-1  
 CMF C24 H20 N2 O3



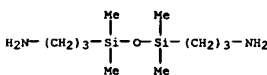
CM 2

CRN 2540-99-0  
 CMF C16 H6 O8 S



CM 3

CRN 2469-55-8  
 CMF C10 H28 N2 O Si2

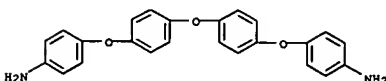


RN 189070-69-7 CAPIUS  
 CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,2-ethanediyl ester, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI)

(CA INDEX NAME)

CM 1

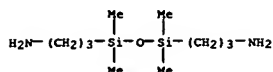
CRN 13080-88-1  
 CMF C24 H20 N2 O3



CM 2

CRN 2469-55-8

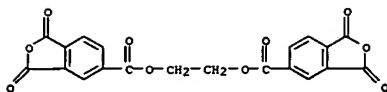
CMF C10 H28 N2 O Si2



CM 3

CRN 1732-96-3

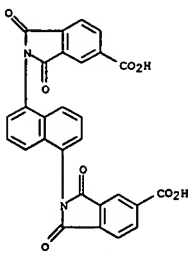
CMF C20 H10 O10



CM 2

CRN 4649-31-4

CMF C28 H14 N2 O8



RN 207303-58-0 CAPLUS

CN

Poly((1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,5-naphthalenediyl(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonylimino-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenyleneiminocarbonyl) (9CI) (CA INDEX NAME)

AB 1,5-Bis(4-trimellitimidonaphthalene (II) was prepared by the condensation

reaction of 1,5-naphthalenediamine and trimellitic anhydride. A series

of aromatic poly(amide-imide)s (IVA-o) was synthesized by the direct polycondensation of the diimide-diacid (II) and various aromatic diamines (IIIA-o). The reaction utilized tri-Ph phosphite and pyridine as condensing agents in the presence of calcium chloride in N-methyl-2-pyrrolidone (NMP). The inherent viscosities of the resulting poly(amide-imide)s were in the range of 0.55.apprx.1.39 dL/g. These polymers were generally soluble in polar solvents, such as N,N-dimethylacetamide (DMAc), NMP, N,N-dimethylformamide (DMF). Flexible and tough poly(amide-imide) films were obtained by casting from a DMAc solution and had tensile strengths of 90.apprx.145 MPa, elongations to

break of 5.apprx.13 %, and initial moduli of 2.29.apprx.3.73 GPa. The glass transition temps. of some poly(amideimide)s were recorded in the range of 206.apprx.218 °C, and most of the polymers did not show discernible glass transition on their DSC traces. The 10% weight loss temps. were

above 522 °C in nitrogen and above 474 °C in air atmospheric

ACCESSION NUMBER: 1998:265527 CAPLUS

DOCUMENT NUMBER: 129:4927

TITLE: Synthesis and properties of poly(amideimide)s based on

1,5-bis(4-trimellitimidonaphthalene

Yang, Chin-Ping; Hsiao, Sheng-Huei; Tsai, Ming-Ru

CORPORATE SOURCE: Department of Chemical Engineering, Tatung Institute

of Technology, Taipei, 10451, Taiwan

SOURCE: Journal of Polymer Research (1998), 5(1), 23-29

CODEN: JPOREP; ISSN: 1022-9760

PUBLISHER: Polymer Society

DOCUMENT TYPE: Journal

LANGUAGE: English

IT 207303-57-9P 207303-58-0P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (synthesis and properties of poly(amideimide)s based on

1,5-bis(4-trimellitimidonaphthalene)

RN 207303-57-9 CAPLUS

CN 1H-Isoindole-5-carboxylic acid,

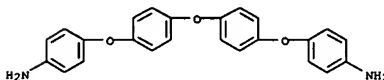
2,2'-(1,5-naphthalenediyl)bis(2,3-dihydro-

1,3-dioxo-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

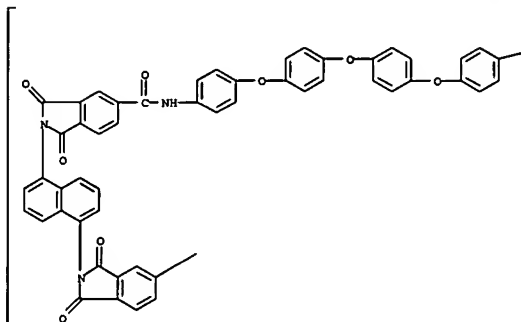
CM 1

CRN 13080-88-1

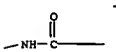
CMF C24 H20 N2 O3



PAGE 1-A



PAGE 1-B



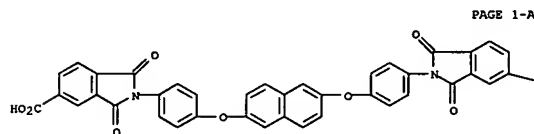
PAGE 2-A

REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

PAGE 2-B

AB The diimide-diacid, 2,6-bis(4-trimellitimidophenoxy)naphthalene (I), was prepared by condensation of 2,6-bis(4-aminophenoxy)naphthalene with trimellitic anhydride. The aromatic poly(amide-imide)s were prepared by the direct polycondensation of I with various aromatic diamines using tri-Ph phosphite in N-methyl-2-pyrrolidone/pyridine solution containing dissolved CaCl<sub>2</sub>. The polymers had inherent viscosity 1.01-2.30 dL/g. Most were soluble in polar solvents, such as AcOMe<sub>2</sub>, and could be cast to transparent, flexible and tough films. The films had tensile strength 79-117 MPa, elongation-at-break 7-61% and initial moduli 2.2-3.0 GPa. Wide-angle x-ray diffraction revealed that some polymers are partially crystalline. The T<sub>gs</sub> were 232-300°. The polymers were stable to 450°, and their 10% weight loss temps. were 511-577° in N and 497-601° in air.

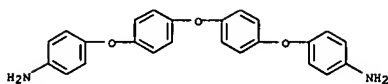
ACCESSION NUMBER: 1998:243604 CAPLUS  
DOCUMENT NUMBER: 129:4922  
TITLE: New poly(amide-imide) syntheses. XXI. Synthesis and properties of aromatic poly(amide-imide)s based on 2,6-bis(4-trimellitimidophenoxy)naphthalene and aromatic diamines  
AUTHOR(S): Yang, Chin-Ping; Haiao, Sheng-Huei; Yang, Chun-Cheng  
CORPORATE SOURCE: Department of Chemical Engineering, Tatung Institute of Technology, Taipei, Taiwan  
SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (1998), 36(6), 919-927  
CODEN: JPACEC; ISSN: 0887-624X  
PUBLISHER: John Wiley & Sons, Inc.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
IT 207341-56-8P 207341-57-8P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation and properties of)  
RN 207341-56-8 CAPLUS  
CN 1H-Isoindole-5-carboxylic acid, 2,2'-(2,6-naphthalenediylbis(oxy-4,1-phenylene))bis(2,3-dihydro-1,3-dioxo-, polymer with 4,4'-(oxybis(4,1-phenyleneoxy))bis(benzeneamine) (9CI) (CA INDEX NAME)  
CM 1  
CRN 153404-81-0  
CMF C40 H22 N2 O10



PAGE 1-A

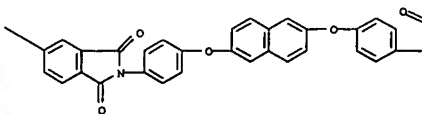
PAGE 1-B

CO<sub>2</sub>H  
CM 2  
CRN 13080-88-1  
CMF C24 H20 N2 O3

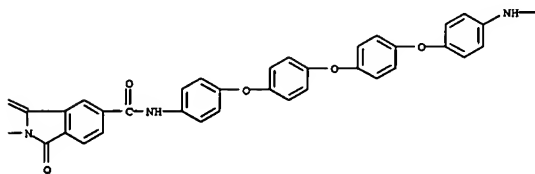


RN 207341-57-9 CAPLUS  
CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,4-phenyleneoxy-2,6-naphthalenediyl]-oxy-1,4-phenylene(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonylimino-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenyleneiminocarbonyl (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



PAGE 1-C



REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

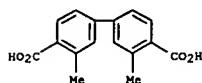
L42 ANSWER 56 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN

AB A series of wholly aromatic polyamides containing 3,3'-dimethylbiphenyl-4,4'-dicarboxylic acid (P-DMBA) and 3,4'-dimethylbiphenyl-4,3'-dicarboxylic acid (Q-DMBA) was prepared by the direct polycondensation method using tri-Ph phosphite and pyridine. Most of the polymers are readily soluble in polar aprotic solvents such as N-methyl-2-pyrrolidone, N,N'-dimethylacetamide, DMSO, pyridine, and m-cresol and could be cast into tough and flexible films. The solubilities of polyamides containing P-DMBA and Q-DMBA as acid components were remarkably improved. These were characterized by inherent viscosity, DSC, thermogravimetric anal., and dynamic mech. spectrometry measurements. The glass transition temps. of these polymers were in the range of 200-300°C and the 5% weight loss temps. were 430-470°C. Films prepared by casting from polymer solns. exhibited good tensile properties.

ACCESSION NUMBER: 1998:228072 CAPIUS  
DOCUMENT NUMBER: 128:257761  
TITLE: Preparation of polyamides containing para-linked dimethylbiphenylene moieties  
AUTHOR(S): Shiotani, Akinori; Washio, Katsutoshi  
CORPORATE SOURCE: Chiba Research Laboratory, UBE Industries Ltd., Chiba,  
290, Japan  
SOURCE: Journal of Applied Polymer Science (1998), 68(5), 847-853  
CODEN: JAPNAB; ISSN: 0021-8995  
PUBLISHER: John Wiley & Sons, Inc.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
IT 205188-77-8P 205188-78-8P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation and properties of)  
RN 205188-77-8 CAPIUS  
CN [1,1'-Biphenyl]-4,4'-dicarboxylic acid, 3,3'-dimethyl-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1

CRN 63297-02-9  
CMF C16 H14 O4



CM 2

CRN 13080-88-1  
CMF C24 H20 N2 O3

L42 ANSWER 57 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN

AB The board is manufactured by (1) applying an undercoat agent containing (A) an epoxy resin, (B) a curing agent containing ether- and optionally sulfone-containing aromatic polyamine, and (C) a curing accelerator containing 2-undecylimidazole, 1-cyanoethyl-2-undecylimidazole, and/or 2,4-diamino-6-[2'-(undecylimidazole-(1'))ethyl-s-triazine], (2) drying, (3) impregnating a substrate with an epoxy resin, (4) and press-laminating dried prepress. The board shows good adhesion of an inner-layer circuit Cu foil and an undercoat layer without acid treatment.

ACCESSION NUMBER: 1998:25699 CAPIUS  
DOCUMENT NUMBER: 128:148593  
TITLE: Manufacture of multilayer printed circuit board  
INVENTOR(S): Takahashi, Yoshiyuki; Egusa, Shigeru; Iketani, Kunio  
PATENT ASSIGNEE(S): Sumitomo Bakelite Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
CODEN: JKOQUF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 3  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10004268	A2	19980106	JP 1996-156573	19960618
SG 72709	A1	20000523	SG 1996-10889	19961022
TW 395146	B	20000621	TW 1996-85112995	19961023
US 5981041	A	19991109	US 1996-740321	19961028
PRIORITY APPLN. INFO.:			JP 1995-284227	A 19951031
			JP 1995-284229	A 19951031
			JP 1996-156573	A 19960618

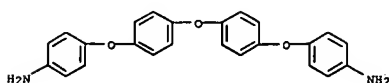
IT 202278-67-8P

RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)  
(manufacture of multilayer printed circuit board with good adhesion of Cu foil and undercoat agent without acid treatment)

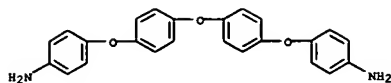
RN 202278-67-9 CAPIUS  
CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane and 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1

CRN 13080-88-1  
CMF C24 H20 N2 O3



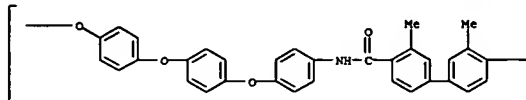
L42 ANSWER 56 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)



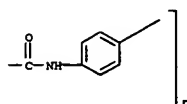
RN 205188-78-9 CAPIUS

CN Poly[oxy-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenyleneimino-carbonyl(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)carbonylimino-1,4-phenylene] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

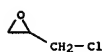


REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L42 ANSWER 57 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)

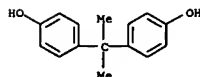
CM 2

CRN 106-89-8  
CMF C3 H5 Cl O



CM 3

CRN 80-05-7  
CMF C15 H16 O2



L42 ANSWER 58 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN

AB Dielec. method was used to study the dynamics of local motion in novel regular polyamide-polyether-polysiloxanes containing short siloxane spacers and rigid aromatic amide fragments. The conditions of the internal rotation and the mechanism of mol. mobility are changed when oxyalkylene chains are incorporated into the central part of the rigid fragment: the correlation between the motions of the central and peripheral parts of the rigid fragment vanishes, and a new relaxation transition appears, which reflects the local motion of the oxyalkylene chains.

ACCESSION NUMBER: 1997:77200 CAPIUS  
DOCUMENT NUMBER: 128:62001  
TITLE: Dielectric relaxation and molecular mobility of polysilarylenes with aromatic amide fragments containing oxyalkylene sequences  
AUTHOR(S): Zhukov, S. V.; Burshtein, L. L.; Borisova, T. I.; Malinovskaya, V. P.; Purkina, A. V.; Osadchev, A. Yu.;

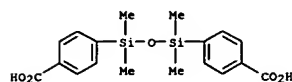
Skorokhodov, S. S.  
CORPORATE SOURCE: Institute of Macromolecular Compounds, Russian Academy of Sciences, St. Petersburg, 199004, Russia  
SOURCE: Vysokomolekulyarnye Soedineniya, Seriya A i Seriya B (1997), 39(9), 1471-1475  
CODEN: VSSBEE; ISSN: 1023-3091

PUBLISHER: MAIK Nauka  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian  
IT 197391-54-1 197391-55-2  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)  
(dielec. relaxation and mol. mobility of polysilarylenes with aromatic amide fragments containing oxyalkylene sequences)

RN 197391-54-1 CAPIUS  
CN Benzoic acid, 4,4'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1

CRN 18054-10-9  
CMF C18 H22 O5 Si2



CM 2

CRN 13080-88-1  
CMF C24 H20 N2 O3

L42 ANSWER 59 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN

AB The mol. dynamics of amorphous polysilarylenes with amide groups and aromatic fragments was studied by the dielec. method. The relaxation properties of these polymers were compared to those of previously characterized polysilarylenes with ester-aromatic fragments. It is shown that there are two types of the local mol. mobility in polyamides, which are analogous to those known in the polyesters. The difference of the relaxation times and the activation energies for the dipole polarization in polysilarylenes with amide and ester groups is caused by an addnl. retardation of the kinetic elements as a result of intermol. hydrogen bond formation in polyamides.

ACCESSION NUMBER: 1997:675510 CAPIUS  
DOCUMENT NUMBER: 127:307847  
TITLE: Molecular mobility of polysilarylenes with aromatic amide fragments  
AUTHOR(S): Zhukov, S. V.; Burshtein, L. L.; Borisova, T. I.; Malinovskaya, V. P.; Asinovskaya, D. N.; Skorokhodov, S. S.

CORPORATE SOURCE: Inst. Macromol. Compd., Russ. Acad. Sci., St. Petersburg, 199004, Russia  
SOURCE: Vysokomolekulyarnye Soedineniya, Seriya A i Seriya B (1997), 39(6), 1010-1013  
CODEN: VSSBEE; ISSN: 1023-3091

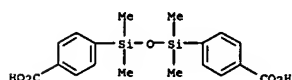
PUBLISHER: MAIK Nauka  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian  
IT 197391-54-1 197391-55-2

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)  
(mol. mobility of polyamide-polycarbosilane-polysiloxane chains)

RN 197391-54-1 CAPIUS  
CN Benzoic acid, 4,4'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1

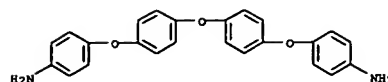
CRN 18054-10-9  
CMF C18 H22 O5 Si2



CM 2

CRN 13080-88-1  
CMF C24 H20 N2 O3

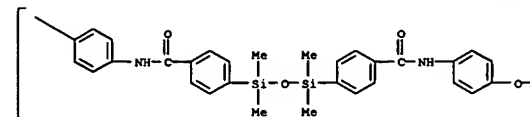
L42 ANSWER 58 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)



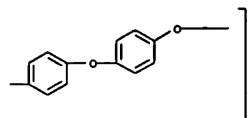
RN 197391-55-2 CAPIUS

CN Poly[oxy-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenyleneiminocarbonyl-1,4-phenylene(1,1,3,3-tetramethyl-1,3-disiloxanediyl)-1,4-phenylenecarbonylimino-1,4-phenylene] (9CI) (CA INDEX NAME)

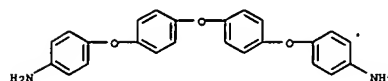
PAGE 1-A



PAGE 1-B



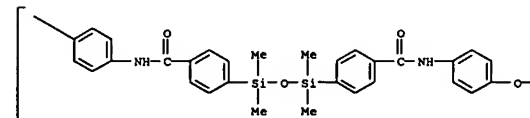
L42 ANSWER 59 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)



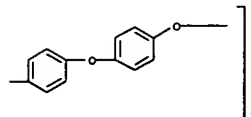
RN 197391-55-2 CAPIUS

CN Poly[oxy-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenyleneiminocarbonyl-1,4-phenylene(1,1,3,3-tetramethyl-1,3-disiloxanediyl)-1,4-phenylenecarbonylimino-1,4-phenylene] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

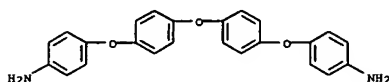


L42 ANSWER 60 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB The paper contain a heat-sensitive layer derived from aromatic isocyanates, leuco dyes, organic Sn compds., and aromatic amine compds. Stirring an aqueous poly(vinyl alc.) solution containing 4,4',4'''-triisocyanato-2,5-dimethoxytriphenylamine and Stann OO 7.1, di-n-octyl dimaleate dispersion 7.1, 3,3'-diaminodiphenylsulfone dispersion 13.3, p-benzylbisphenyl dispersion 33.4, CaCO<sub>3</sub> dispersion 53, 16l Zn stearate solution 30, and 15l poly(vinyl alc.) 45 parts gave a coating solution, which was applied onto paper (50 g/m<sup>2</sup>), showing good sensitivity and image preservation.

ACCESSION NUMBER: 1997:617493 CAPIUS  
 DOCUMENT NUMBER: 127:294753  
 TITLE: Heat-sensitive printing paper with high sensitivity, less blushing, and good image preservation  
 INVENTOR(S): Tanaka, Taku; Iwaya, Tetsuro  
 PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
 CODEN: JIQUAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09241549	A2	19970916	JP 1996-57069	19960314
PRIORITY APPLN. INFO.:			JP 1996-57069	19960314

IT 13080-88-1, Bis[4-(4-aminophenoxy)phenyl] ether  
 RL: TEM (Technical or engineered material use); USES (Uses) (heat-sensitive printing paper with high sensitivity, less blushing, and good image preservation)  
 RN 13080-88-1 CAPIUS  
 CN Benzenamine, 4,4'-[oxybis(4,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)



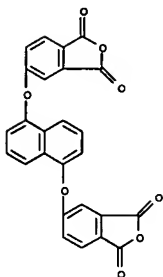
L42 ANSWER 61 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB A naphthalene unit-containing bis(ether anhydride), 4,4'-(1,5-naphthylenedioxy)diphthalic anhydride, was prepared in 3 steps starting from the nucleophilic nitro-displacement reaction of 1,5-dihydroxynaphthalene and 4-nitrophthalonitrile in N,N-dimethylformamide (DMF) solution in the presence of K<sub>2</sub>CO<sub>3</sub>. High-molar aromatic poly(ether imide)s were synthesized using a 2-stage polymerization process from the bis(ether anhydride) and 10 aromatic diamines. The intermediate poly(ether amic acid)s had inherent viscosities of 0.66-1.27 dl/g. The films of poly(ether imide)s derived from some diamines, such as p-phenylenediamine, benzidine, and bis[4-(4-aminophenoxy)phenyl] ether, crystallized and embrittled during the thermal imidization process. The other poly(ether imide)s were amorphous materials and could be fabricated into transparent, flexible, and tough films. These poly(ether imide) films had yield strengths of 111-125 MPa, tensile strength of 96-150 MPa, elongations to break of 10-38l, and initial moduli of 1.6-2.4 GPa. All of these polymers were insol. in organic solvents, except for that derived from 2,2-bis[4-(4-aminophenoxy)phenyl]propane. Their T<sub>g</sub>'s were recorded in the range of 226-265° by DSC. Thermogravimetric anal. showed that all the polymers were stable ≤ 535° in both air and N atmospheric

ACCESSION NUMBER: 1997:464577 CAPIUS  
 DOCUMENT NUMBER: 127:191148  
 TITLE: Synthesis and properties of poly(ether imide)s derived from 4,4'-(1,5-naphthylenedioxy)diphthalic anhydride and various aromatic diamines  
 AUTHOR(S): Hsiao, Sheng Huei; Yang, Chin Ping; Chu, Kuan Yu  
 CORPORATE SOURCE: Dep. Chemical Engineering, Tatung Inst. Technology, Taipei, Taiwan  
 SOURCE: Macromolecular Chemistry and Physics (1997), 198(7), 2153-2162  
 CODEN: MCHPES; ISSN: 1022-1352  
 PUBLISHER: Huethig & Wepf  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 194150-65-7P

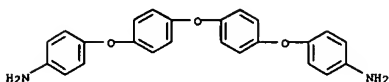
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation and properties of poly(ether imide)s derived from (naphthylenedioxy)diphthalic anhydride and aromatic diamines)  
 RN 194150-65-7 CAPIUS  
 CN 1,3-Isobenzofurandione, 5,5'-[1,5-naphthalenediylbis(oxy)]bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1  
 CRN 181487-22-9  
 CMF C26 H12 O8

L42 ANSWER 61 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)



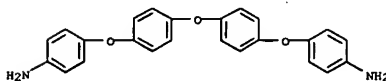
CM 2  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3



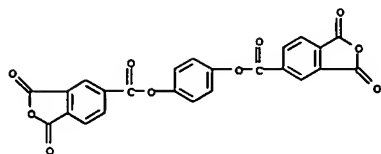
L42 ANSWER 62 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB Published data on crystal lattice unit cell parameters were used to calculate mol. packing d. coeffs. (Kc) in the crystalline state for a series of polyimides. The values of Kc were shown to decrease, the larger the chain cross-section thickness, and the lower the ratio of chain persistence length to chain thickness.

ACCESSION NUMBER: 1997:411680 CAPIUS  
 DOCUMENT NUMBER: 127:136332  
 TITLE: Molecular packing density in the crystalline state of semi-rigid chain polymers. I. Polyimides  
 AUTHOR(S): Privalko, Valery P.; Pedosenko, Alexey V.  
 CORPORATE SOURCE: Inst. Macromol. Chem., Natl. Acad. Sci. Ukraine, Kiev, 253160, Ukraine  
 SOURCE: Polymer Engineering and Science (1997), 37(6), 978-982  
 CODEN: PYESA; ISSN: 0032-3888  
 PUBLISHER: Society of Plastics Engineers  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 53563-77-2 53563-79-4 53938-98-0  
 53938-99-1  
 RL: PRP (Properties) (calcn. of mol. packing d. of polyimides in crystalline state)  
 RN 53563-77-2 CAPIUS  
 CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3



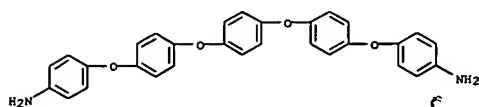
CM 2  
 CRN 2770-49-2  
 CMF C24 H10 O10



RN 53563-79-4 CAPIUS  
 CH 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

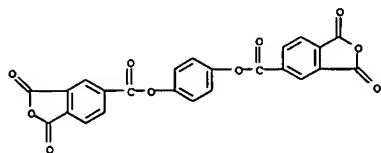
CH 1

CRN 53563-78-3  
 CMF C30 H24 N2 O4

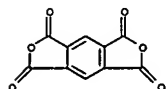


CH 2

CRN 2770-49-2  
 CMF C24 H10 O10

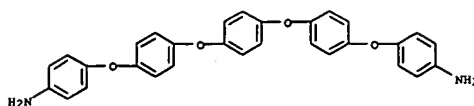


RN 53938-98-0 CAPIUS  
 CH 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)



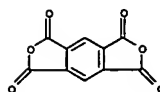
CH 1

CRN 53563-78-3  
 CMF C30 H24 N2 O4



CH 2

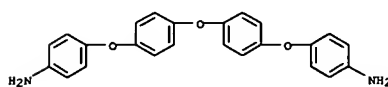
CRN 89-32-7  
 CMF C10 H2 O6



RN 53938-99-1 CAPIUS  
 CH 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CH 1

CRN 13080-88-1  
 CMF C24 H20 N2 O3



CH 2

CRN 89-32-7  
 CMF C10 H2 O6

L42 ANSWER 63 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB Polyarom. ethers and thioethers with pendent cyclopentadienyliron moieties  
 have been prepared in very high yield using a highly efficient and mild methodol.

ACCESSION NUMBER: 1997:381913 CAPIUS  
 DOCUMENT NUMBER: 127:135904  
 TITLE: Molecular design in organometallic chemistry: the first example in the synthesis of poly(cyclopentadienyliron) cations of polyaromatic ethers and thioethers  
 AUTHOR(S): Abd-El-Aziz, Alaa S.; de Denuis, Christine R.  
 CORPORATE SOURCE: Dep. Chem., Univ. Winnipeg, Winnipeg, MB, R3B 2E9, Can.  
 SOURCE: Journal of the Chemical Society, Chemical Communications (1994), (5), 663-665  
 CODEN: JCCQNT; ISSN: 0022-4936  
 PUBLISHER: Royal Society of Chemistry  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

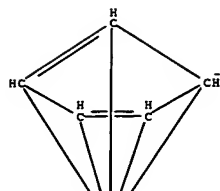
IT 172793-93-0P 172794-17-1P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (synthesis of poly(cyclopentadienyliron) cations of polyarom. ethers and thioethers)  
 RN 172793-93-0 CAPIUS  
 CH Iron(3+), [μ3-{η6:η6-1,4-bis[4-(4-chlorophenoxy)phenoxy]benzene}]tris(η5-2,4-cyclopentadien-1-yl)tri-, tris(hexafluorophosphate(1-)) (9CI) (CA INDEX NAME)

CH 1

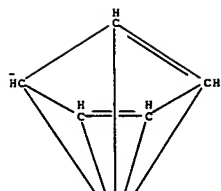
CRN 172793-92-9  
 CMF C45 H35 Cl2 Fe3 O4  
 CCI CCS



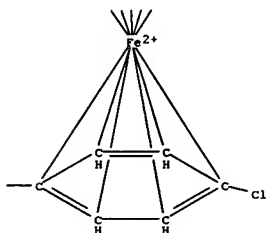
PAGE 1-A



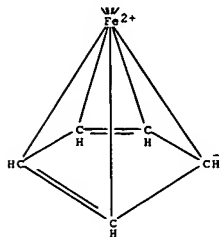
PAGE 1-C



PAGE 2-C



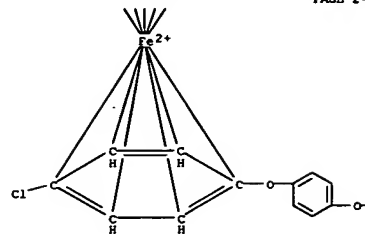
PAGE 3-B



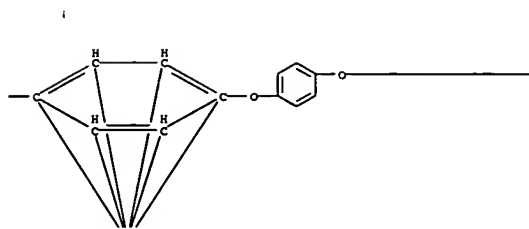
CM 2

CRN 16919-18-9  
CMF F6 P  
CCI CCS

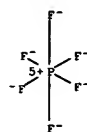
PAGE 2-A



PAGE 2-B



(Continued)

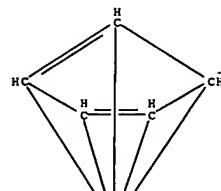


RN 172794-17-1 CAPLUS  
CN Iron(4+), [μ4-{η6:η6:η6-1,4-bis[4-(4-chlorophenoxy)phenoxy]phenoxylbenzene}]tetrakis(η5-2,4-cyclopentadien-1-yl)tetra-, tetrakis[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

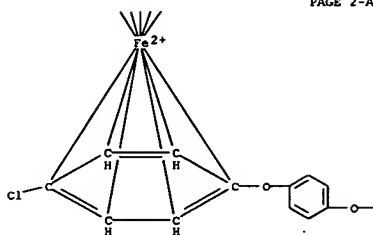
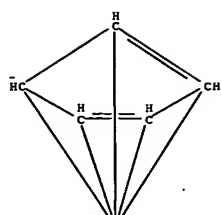
CM 1

CRN 172794-16-0  
CMF C62 H48 C12 Fe4 O6  
CCI CCS

PAGE 1-A

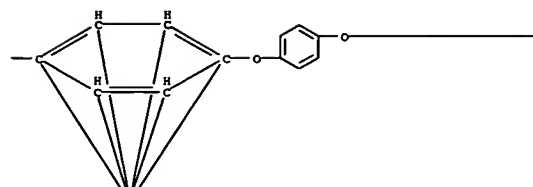


PAGE 1-D

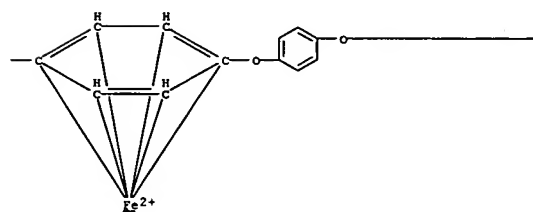


PAGE 2-A

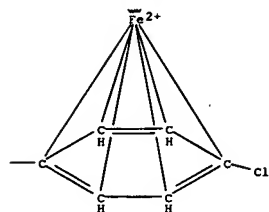
PAGE 2-B



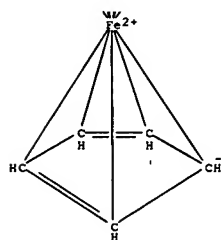
PAGE 2-C



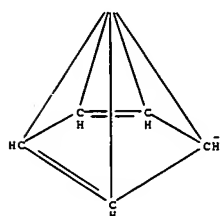
PAGE 2-D



PAGE 3-B



PAGE 3-C

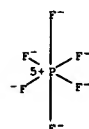


CM 2

CRN 16919-18-9

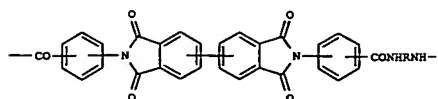
CMF F6 P

CCI CCS

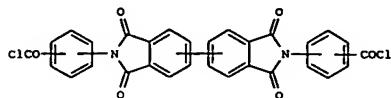


REFERENCE COUNT:  
THIS

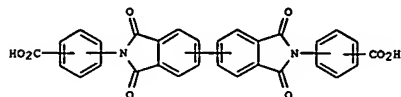
14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR  
RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT



I



II

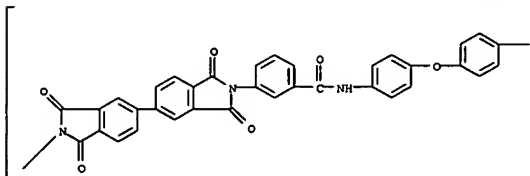


III

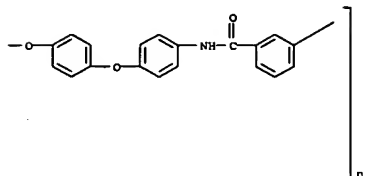
AB The aromatic polyamide-polyimides have structural repeating units I (R = aromatic diamine). The aromatic polyamide-polyimides are manufactured by (1) polymerizing diimidodicarboxylic acid dichloride II by treating with substantially equimolar amts. of aromatic diamines, (2) polymerizing diimidodicarboxylic acid III by treating with substantially equimolar amts. of aromatic diamines in the presence of condensation agents, or (3) treating biphenyltetracarboxylic acid dianhydride with substantially double molar amts. of aminobenzoic acid in solvents to produce III and then treating III with substantially equimolar amts. of aromatic diamines in the presence of condensation agents. M-aminobenzoic acid was treated with 3,3',4,4'-biphenyltetracarboxylic acid dianhydride in N-methyl-2-pyrrolidone (NMP) to give 91.2% N,N'-bis(3-carboxyphenyl)biphenyl-3,3',4,4'-tetracarboxylic acid diimide, which was treated with SOCl<sub>2</sub> in DMF to give 99.7% diimidodicarboxylic acid dichloride (sm-Cl). Then, sm-Cl was treated with 4,4'-diaminodiphenyl ether in NMP/pyridine to give 94.2% aromatic polyamide-polyimide showing logarithmic viscosity (minh) 0.49 dl/g, glass transition temperature (T<sub>g</sub>) 253°, and 5% weight loss temperature 474°. The am. polyamide-polyimide was dissolved in NMP, cast on a glass plate, and heated to give a yellowish transparent film (thickness 19 μm), which showed tensile strength 1400 kg/cm<sup>2</sup>, elongation 35%, and initial tensile modulus 34,000 kg/cm<sup>2</sup>.  
ACCESSION NUMBER: 1997:344315 CAPLUS

L42 ANSWER 64 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)  
RN 186195-12-0 CAPLUS  
CN Poly[(1,1',3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-isoindole]-2,2'-diyl)-1,3-phenylene-carbonylimino-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenyleneimino-carbonyl-1,3-phenylene] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

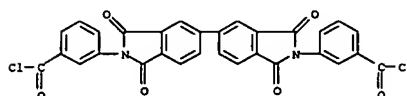


L42 ANSWER 64 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)  
DOCUMENT NUMBER: 127:18169  
TITLE: Heat-resistant aromatic polyamide-polyimides with good moldability and manufacture thereof  
INVENTOR(S): Shiotani, Akinori; Koda, Masafumi; Washio, Katsutoshi  
PATENT ASSIGNEE(S): Ube Industries, Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.  
CODEN: JKOQAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09077872	A2	19970325	JP 1995-233902	19950912
JP 3496697	B2	20040216		

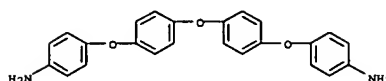
PRIORITY APPL. INFO.: JP 1995-233902 19950912

IT 186195-11-PP 186195-12-OP  
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation) (manufacture of heat-resistant aromatic polyamide-polyimides with good moldability)  
RN 186195-11-9 CAPLUS  
CN Benzoyl chloride, 3,3'-(1,1',3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-isoindole]-2,2'-diyl)bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)  
CM 1  
CRN 186194-92-3  
CMF C30 H14 C12 N2 O6

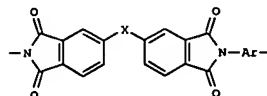


CM 2

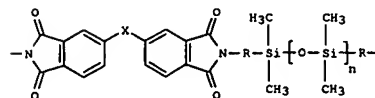
CRN 13080-88-1  
CMF C24 H20 N2 O3



L42 ANSWER 65 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
GI



I



II

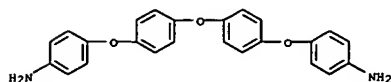
AB The title products contain polyimide adhesives of 40-95 mol% I and 5-60 mol% II units (X = SO<sub>2</sub>, CO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>; Ar = divalent aromatic group; R = Cl-10 alkylene, CH<sub>2</sub>OC<sub>6</sub>H<sub>4</sub>; n = 1-20). A polyimide soluble in many organic solvents and forming tough cast films was prepared from 3,4'-diaminobiphenyl 67, 1,3-bis(3-aminopropyl)-1,1,3,3-tetramethyldisiloxane 33, and 3,3',4,4'-diphenyl sulfone-tetracarboxylic dianhydride 100 mmol.  
ACCESSION NUMBER: 1997:317641 CAPLUS  
DOCUMENT NUMBER: 126:293760  
TITLE: Polyimides with good solubility in organic solvents, processability and heat resistance and manufacture thereof  
INVENTOR(S): Oka, Osamu; Nishigaya, Takeshi  
PATENT ASSIGNEE(S): Tomoe-gawa Paper Co Ltd, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 24 pp.  
CODEN: JKOQAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09067438	A2	19970311	JP 1995-245148	19950831
JP 2949568	B2	19990913		
US 5723571	A	19980303	US 1996-703151	19960829

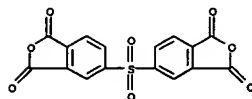
PRIORITY APPL. INFO.: JP 1995-245148 19950831

IT 189070-56-2P 189070-69-7P  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polyimides with good solubility in organic solvents, processability and heat resistance and manufacture thereof)

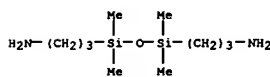
L42 ANSWER 65 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)  
 RN 189070-56-2 CAPLUS  
 CN 1,3-isobenzofurandione, 5,5'-sulfonylbis-, polymer with  
 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] and 3,3'-(1,1,3,3-  
 tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI) (CA INDEX NAME)  
 CH 1  
 CRN 13080-88-1  
 CHF C24 H20 N2 O3



CH 2  
 CRN 2540-99-0  
 CHF C16 H6 O8 S

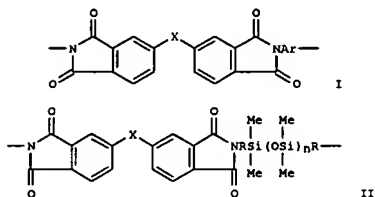


CH 3  
 CRN 2469-55-8  
 CHF C10 H28 N2 O Si2



RN 189070-69-7 CAPLUS  
 CN 5-isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,2-ethanediyl  
 ester, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] and  
 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI)  
 (CA INDEX NAME)  
 CH 1  
 CRN 13080-88-1

L42 ANSWER 66 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
 GI



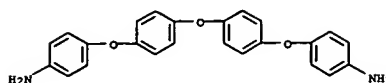
AB The title products contain polyimide adhesives of 40-95 mol% I and 5-60  
 mol% II units (X = SO2, CO2CH2CH2CO2; Ar = divalent aromatic group; R =  
 Cl-10  
 alkylene, CH2OC6H4; n = 1-20). A 25%-solids liquid adhesive was  
 prepared from  
 3,4'-diaminobiphenyl 67, 1,3-bis(3-aminopropyl)-1,1,3,3-  
 tetramethyldisiloxane 33, and 3,3',4,4'-diphenyl sulfone-tetracarboxylic  
 dianhydride 100 mmol in THF.

ACCESSION NUMBER: 1997:314913 CAPLUS  
 DOCUMENT NUMBER: 126:294380  
 TITLE: Adhesive tapes and liquid adhesives for electronic  
 parts, curable at relatively low temperature with  
 good heat resistance and reliability  
 INVENTOR(S): Oka, Osamu; Nishigaya, Takeshi; Yamanashi, Fumyoshi  
 PATENT ASSIGNEE(S): Tomoeagawa Paper Co Ltd, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 24 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

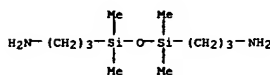
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09067559	A2	19970311	JP 1995-245149	19950831
JP 2992462	B2	19991220		
US 5866250	A	19990202	US 1996-704160	19960828
US 5959068	A	19990928	US 1998-190174	19981112
			JP 1995-245149	19950831
			US 1996-704160	19960828

IT 189070-56-2P 189070-69-7P  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
 engineered material use); PREP (Preparation); USES (Uses)  
 (adhesive tapes and liquid adhesives for electronic parts, curable at

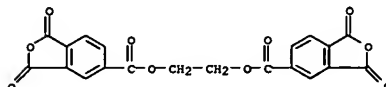
L42 ANSWER 65 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)  
 CHF C24 H20 N2 O3



CH 2  
 CRN 2469-55-8  
 CHF C10 H28 N2 O Si2

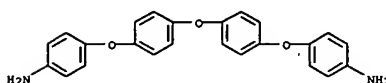


CH 3  
 CRN 1732-96-3  
 CHF C20 H10 O10

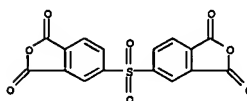


L42 ANSWER 66 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)  
 relatively low temp. with good heat resistance and reliability)  
 RN 189070-56-2 CAPLUS  
 CN 1,3-isobenzofurandione, 5,5'-sulfonylbis-, polymer with  
 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] and 3,3'-(1,1,3,3-  
 tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

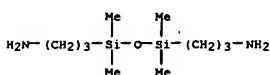
CH 1  
 CRN 13080-88-1  
 CHF C24 H20 N2 O3



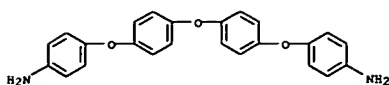
CH 2  
 CRN 2540-99-0  
 CHF C16 H6 O8 S



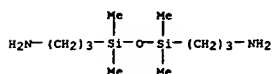
CH 3  
 CRN 2469-55-8  
 CHF C10 H28 N2 O Si2



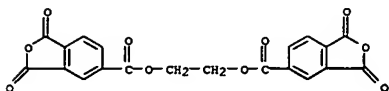
RN 189070-69-7 CAPLUS  
 CN 5-isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,2-ethanediyl  
 ester, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] and  
 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI)  
 (CA INDEX NAME)  
 CH 1



CM 2  
 CRN 2469-55-8  
 CMF C10 H28 N2 O S12



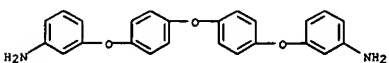
CM 3  
 CRN 1732-96-3  
 CMF C20 H10 O10



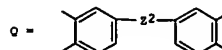
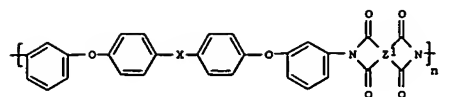
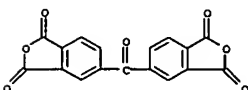
IT 58883-56-ODP, reaction products with phthalic anhydride  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); PREP (Preparation); USES (Uses)  
 (polyimide compns. containing polysilylacetylenes with improved mech. properties and heat-resistance)

RN 58883-56-0 CAPLUS  
 CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with 3,3'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1  
 CRN 58883-55-9  
 CMF C24 H20 N2 O3



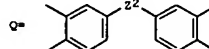
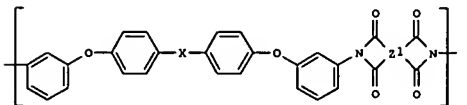
CM 2  
 CRN 2421-28-5  
 CMF C17 H6 O7



AB Title compns. contain 100 parts polyimides having repeating units I [X = direct bond, SO2, CO, O, S, CMe2, C(CF3)2; Z1 = 1,2,4,5-benzenetetrayl, 2,3,6,7-naphthalenetetrayl, Q; Z2 = direct bond, O, CO, SO2, CH2, CMe2, C(CF3)2, 4-OC6H4O, CMe2(C6H4O-4)2] and 5-50 parts Si-containing polymers having repeating units [m-SiHR1C.tplbond.CC6H4C.tplbond.C] and/or [m-SiR2C.tplbond.CC6H4C.tplbond.C], (R1, R2 = H, C1-30 alkyl, alkenyl, alkynyl, Ph, naphthyl; the aromatic group may be substituted with halo, OH, NH2, CO2H), and/or their cured products. Polyimide films containing the Si-containing polymers are also claimed. Thus, phthalic anhydride-modified 4,4'-bis(3-aminophenoxy)biphenyl-pyromellitic dianhydride copolymer (glass transition temperature 249°, melt viscosity 7800 P at 400°) was melt kneaded with 5% m-diethynylbenzene-phenylsilane copolymer (weight-average mol. weight 4800, number-average mol. weight 2510), pelletized, and injection molded to give test pieces, which showed tensile strength 1120 kg/cm2, elongation 55%, and tensile modulus 330 kg/mm2.

ACCESSION NUMBER: 1997:207097 CAPLUS  
 DOCUMENT NUMBER: 126:200264  
 TITLE: Polyimide compositions containing polysilylacetylenes with improved mechanical properties and heat-resistance  
 INVENTOR(S): Oikawa, Juichi; Tamai, Masaji; Yamaguchi, Teruhiro  
 PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Japan; Mitsui Chemicals Inc.  
 SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.  
 CODEN: JKOXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09012881	A2	19970114	JP 1995-169434	19950705



AB The compns. contain 100 parts polyimides having repeating units I [X = direct link, SO2, CO, O, S, CMe2, C(CF3)2; Z1 = 1,2,4,5-benzenetetrayl, 2,3,6,7-naphthalenetetrayl, Q; Z2 = direct link, O, CO, SO2, CH2, CMe2, C(CF3)2, 4-OC6H4O, CMe2(C6H4O-4)2] and 5-100 parts polysiloxanes. Polyimide films containing polysiloxanes are also claimed. Thus, a polyamic acid varnish prepared from 0.060 mol 4,4'-bis(3-aminophenoxy)biphenyl and 0.0576 mol pyromellitic dianhydride was mixed with 0.048 mol (EtO)4Si and H2O, coated on a glass plate, and heated at 250° for 4 h to give a 32-μm film, which showed tensile strength 10.53 kg/mm2, elongation 52%, and tensile modulus 304 kg/mm2.

ACCESSION NUMBER: 1997:207096 CAPLUS  
 DOCUMENT NUMBER: 126:212884  
 TITLE: Polyimide compositions containing polysiloxanes with improved mechanical properties and heat-resistance, and films thereof  
 INVENTOR(S): Oikawa, Juichi; Tamai, Masaji; Yamaguchi, Teruhiro  
 PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.  
 CODEN: JKOXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09012882	A2	19970114	JP 1995-169435	19950705

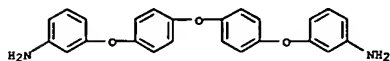
PRIORITY APPLN. INFO.: JP 1995-169435 19950705

IT 58883-56-ODP, 4,4'-Bis(3-aminophenoxy)diphenyl ether-3,3',4,4'-benzophenonetetracarboxylic dianhydride copolymer, reaction products with phthalic anhydride  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); PREP (Preparation); USES (Uses)  
 (polyimide compns. containing polysiloxanes with improved mech. properties and heat resistance)

L42 ANSWER 68 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)  
 RN 58883-56-0 CAPLUS  
 CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with  
 3,3'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

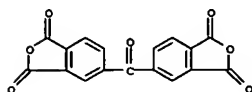
CH 1

CRN 58883-55-9  
 CMF C24 H20 N2 O3

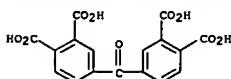


CH 2

CRN 2421-28-5  
 CMF C17 H6 O7



L42 ANSWER 69 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



L42 ANSWER 69 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB The polyimides are manufactured by reacting aromatic diamines  
 H2NC6H4OC6H4XC6H4OC6H4NH2 (X = direct bond, SO2, O, S, etc.) with  
 tetracarboxylic dianhydrides and imidation of the resulting polyamic  
 acids  
 in the presence of aromatic compds. having 22 groups of OH, NH2, COOH,  
 CH2COOH and/or SO3H. Stirring 4,4'-bis(3-aminophenoxy)biphenyl 36.84,  
 NMP  
 233, and pyromellitic dianhydride 20.72 g for 20 h, adding 13.81 g  
 m-hydroxybenzoic acid, spreading the solution on a glass plate, and  
 heating 1  
 h at 100° and 4 h at 250° gave a 32-μm film with glass  
 temperature 249° and linear thermal expansion coefficient 38 ppm/K at  
 50-150°.

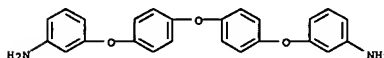
ACCESSION NUMBER: 1997:191861 CAPLUS  
 DOCUMENT NUMBER: 126:186555  
 TITLE: Manufacture of dimension-stable polyimides based on  
 bis(aminophenoxy)biphenyl-type compounds  
 INVENTOR(S): Ookawa, Juichi; Tamai, Masaji; Yamaguchi, Teruhiro  
 PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.  
 CODEN: JKOXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09012719	A2	19970114	JP 1995-169433	19950705
PRIORITY APPLN. INFO.:			JP 1995-169433	19950705

IT 187540-88-1P, 4,4'-Bis(3-aminophenoxy)diphenyl  
 ether-3,3',4,4'-benzophenonetetracarboxylic acid copolymer  
 RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)  
 (manufacture of dimension-stable polyimides based on  
 bis(aminophenoxy)biphenyl-type compds.)  
 RN 187540-88-1 CAPLUS  
 CN 1,2-Benzenedicarboxylic acid, 4,4'-carbonylbis-, polymer with  
 3,3'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CH 1

CRN 58883-55-9  
 CMF C24 H20 N2 O3



CH 2

CRN 2479-49-4  
 CMF C17 H10 O9

L42 ANSWER 70 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
 GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The manufacture comprises (i) reacting aromatic diamines I [X = SO2, CO,  
 O, S,  
 CMe2, C(CF3)2] and tetracarboxylic dianhydrides II [Ar = IV, V, VI; Ar1 =  
 direct bond, O, CO, SO2, CH2, CMe2, C(CF3)2, p-OC6H4O, p-OC6H4CMe2C6H4O]  
 in solvents of 22 mixts. selected from water-soluble ethers,  
 water-soluble alcs., water-soluble amides, water-soluble ketones, and  
 H2O and (ii)  
 chemical or thermal imidization. The polyamides and the films are also  
 claimed. Thus, reacting 0.100 mol 4,4'-bis(3-aminophenoxy)biphenyl and  
 0.095 mol pyromellitic dianhydride at room temperature in a mixture of  
 THF and  
 MeOH, applying the obtained polyamic acid varnish to a glass plate, and  
 imidization at 250° gave a film with linear expansion coefficient at  
 50-150° 35 ppm/K and solvent content under limit of detection. A  
 polyimide powder obtained by stirring the varnish in the presence of  
 isoquinoline and Ac2O at 70°, followed by heating at 50°  
 then at 250°, exhibited Tg 250°, logarithmic viscosity 0.52,  
 melt viscosity 8200 P, and solvent content under limit of detection.  
 ACCESSION NUMBER: 1997:148185 CAPLUS  
 DOCUMENT NUMBER: 126:157960  
 TITLE: Manufacture of aromatic polyimides with low solvent  
 residues and improved dimensional stability and films  
 thereof  
 INVENTOR(S): Ookawa, Juichi; Tamai, Masaji; Yamaguchi, Teruhiro  
 PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.  
 CODEN: JKOXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

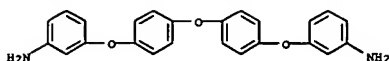
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08333450	A2	19961217	JP 1995-139436	19950606
PRIORITY APPLN. INFO.:			JP 1995-139436	19950606

IT 58883-56-ODP, reaction products with phthalic anhydride  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
 engineered material use); PREP (Preparation); USES (Uses)  
 (manufacture of aromatic polyimides with low solvent residues and  
 improved  
 dimensional stability for films)

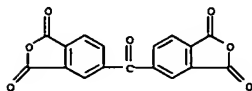
RN 58883-56-0 CAPLUS  
 CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with  
 3,3'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CH 1

CRN 58883-55-9  
 CMF C24 H20 N2 O3



CM 2

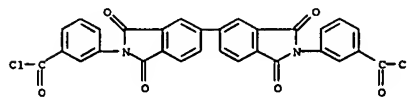
CRN 2421-28-5  
CMF C17 H6 O7

L42 ANSWER 71 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
AB Four new diimide-dicarboxylic acids were prepared by condensation of a-  
or  
a-biphenyltetra-carboxylic dianhydride with para- or meta-aminobenzoic acid. A series of aromatic poly(amide-imide)s containing these diimide-dicarboxylic units was prepared by three methods: (1) acid chloride method, (2) tri-Ph phosphite method, and (3) one-pot method. A typical polymer of the series is readily soluble in polar aprotic solvents such as N-methyl-2-pyrrolidone, dimethylsulfoxide, and pyridine, and could be cast into tough and flexible films. These were characterized by inherent viscosity, differential scanning calorimetry, and thermogravimetric anal. measurements. The glass transition temps. of these polymers were in the range of 220-290°C, and the 5% weight loss temps. were 450-500°C. Films prepared by casting from polymer solns. exhibited good tensile properties.

ACCESSION NUMBER: 1997:73565 CAPLUS  
DOCUMENT NUMBER: 126:131850  
TITLE: Preparation of poly(amide-imide)s derived from biphenyltetra-carboxylic dianhydrides  
AUTHOR(S): Shiotani, Akinori; Kohda, Masafumi  
CORPORATE SOURCE: Chiba Res. Lab., UBE Ind. Ltd., Chiba, 290, Japan  
SOURCE: Journal of Applied Polymer Science (1997), 63(7), 865-873  
CODEN: JAPNAB; ISSN: 0021-8995  
PUBLISHER: Wiley  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
IT 186195-11-9P 186195-12-0P 186195-34-6P  
186195-44-8P

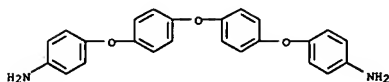
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(preparation and properties of poly(amide-imide)s derived from biphenyltetra-carboxylic dianhydrides)  
RN 186195-11-9 CAPLUS  
CN Benzoyl chloride,  
3,3'-(1,1',3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-isoindole]-2,2'-diyl)bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 186194-92-3  
CMF C30 H14 Cl2 N2 O6

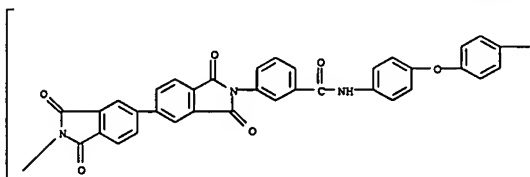
CM 2

CRN 13080-88-1

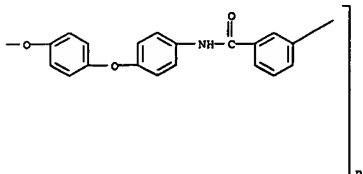


RN 186195-12-0 CAPLUS  
CN Poly[(1,1',3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-isoindole]-2,2'-diyl)-1,3-phenylene-carbonylimino-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenyleneimino-carbonyl-1,3-phenylene] (9CI) (CA INDEX NAME)

PAGE 1-A

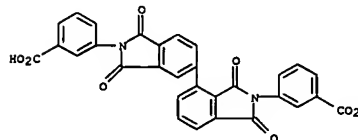


PAGE 1-B

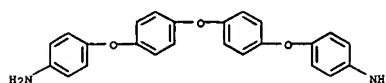


RN 186195-34-6 CAPLUS  
CN Benzoic acid, 3,3'-(1,1',3,3'-tetrahydro-1,1',3,3'-tetraoxo[4,5'-bi-2H-isoindole]-2,2'-diyl)bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

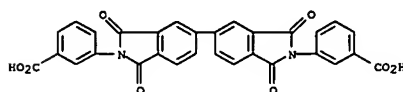
CRN 186194-90-1  
CMF C30 H16 N2 O8

CM 2

CRN 13080-88-1  
CMF C24 H20 N2 O3

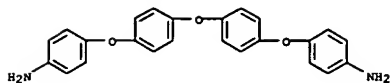
RN 186195-44-8 CAPLUS  
CN Benzoic acid, 3,3'-(1,1',3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-isoindole]-2,2'-diyl)bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 186194-88-7  
CMF C30 H16 N2 O8

CM 2

CRN 13080-88-1  
CMF C24 H20 N2 O3



REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

AB The method comprises dividing polyimide mol. structures into unit structures; calcn. of cohesive energy and mol volume for each unit structure; calcn. of cohesive energy d. (CED); and calcn. of gas diffusion coeffs. from CED. The method can accurately calculate gas permeability coeffs. in the polyimide films.

ACCESSION NUMBER: 1996:643905 CAPIUS  
DOCUMENT NUMBER: 125:277217  
TITLE: Method for calculation of diffusion coefficients of non-condensable gases in aromatic polyimide films  
INVENTOR(S): Hirayama, Sukeaki; Kusuki, Yoshihiro  
PATENT ASSIGNEE(S): Ube Industries, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
CODEN: JYOKAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

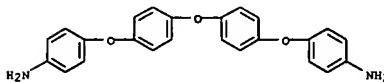
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08210964	A2	19960820	JP 1994-331713	19941209

PRIORITY APPLM. INFO.: JP 1994-331713 19941209

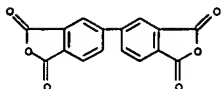
IT 72356-19-5  
RL: ANT (Analyte); PEP (Physical, engineering or chemical process); PRP (Properties); ANST (Analytical study); PROC (Process)  
(method for calcn. of diffusion coeffs. of non-condensable gases in aromatic polyimide films)

RN 72356-19-5 CAPIUS  
CN [3,5'-Bisobenzofuran]-1,1',3,3'-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1  
CRN 13080-88-1  
CMF C24 H20 N2 O3



CM 2  
CRN 2420-87-3  
CMF C16 H6 O6



AB Solvable fluorinated copolyimides based on a mixture of fluorinated and nonfluorinated diamines (comonomers) and dianhydrides of 3,3',4,4' benzophenone- and 3,3', 4,4'-diphenyloxidetetra-carbonic acids (intermonomers) are synthesized. Solubility of the polymers thus obtained and their viscous characteristics and film formation ability have been studied. The effect of the structure of the comonomers has been studied on the thermal stability and thermomech. properties of the film materials.

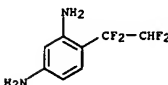
Antifriction self-lubricating materials and solid lubricants have been obtained.

ACCESSION NUMBER: 1996:557998 CAPIUS  
DOCUMENT NUMBER: 125:226176  
TITLE: Synthesis and properties of fluorine-containing polyimides as components of solid lubricant coatings  
AUTHOR(S): Shelud'ko, E. V.; Golod, L. P.; Slutskii, V. I.  
CORPORATE SOURCE: Inst. Bioorg. Khim. Neftekhim., AN Ukr., Kiev, Ukraine  
SOURCE: Neftepererabotka i Neftekhimiya (Kiev) (1994), 46, 47-51  
CODEN: NEFNBY; ISSN: 0548-1406  
PUBLISHER: Naukova Dumka  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian

IT 182006-10-6 182006-20-8  
RL: TEM (Technical or engineered material use); USES (Uses)  
(fluorine-containing polyimides as components of solid lubricant coatings)

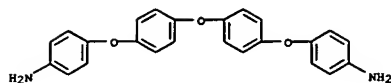
RN 182006-10-6 CAPIUS  
CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] and 4-(1,1,2,2-tetrafluoroethyl)-1,3-benzenediamine (9CI) (CA INDEX NAME)

CM 1  
CRN 182006-03-7  
CMF C8 H8 F4 N2

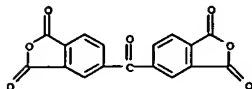


CM 2  
CRN 13080-88-1  
CMF C24 H20 N2 O3



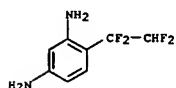


CM 3

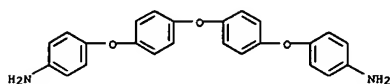
CRN 2421-28-5  
CMF C17 H6 O7

RN 182006-20-8 CAPLUS  
CM 1,3-isobenzofurandione, 5,5'-oxybis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] and 4-(1,1,2,2-tetrafluoroethyl)-1,3-benzenediamine (9CI) (CA INDEX NAME)

CM 1

CRN 182006-03-7  
CMF C8 H8 F4 N2

CM 2

CRN 13080-88-1  
CMF C24 H20 N2 O3

L42 ANSWER 74 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN

AB The title polymers are formed by reacting an aromatic tetracarboxylic dianhydride with a mixture of H<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>OC<sub>6</sub>H<sub>4</sub>XC<sub>6</sub>H<sub>4</sub>OC<sub>6</sub>H<sub>4</sub>NH<sub>2</sub> (X = linking group) and H<sub>2</sub>N(CH<sub>2</sub>)<sub>3</sub>SiMe<sub>2</sub>O(SiMe<sub>2</sub>)<sub>n</sub>SiMe<sub>2</sub>(CH<sub>2</sub>)<sub>3</sub>NH<sub>2</sub> (n = 0-7) in 1:0.10-0.005 molar ratio. A polyimide producing an adhesive strength 2.02 kg/cm when bonded to a Cu foil at 320°/5 kg/cm<sup>2</sup> for 15 min was prepared from 4,4'-bis(3-aminophenoxy)biphenyl 0.098, BY16-871 0.002, pyromellitic dianhydride 0.096, and phthalic anhydride 0.008 mol.

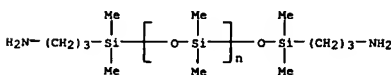
ACCESSION NUMBER: 1996:509548 CAPLUS  
DOCUMENT NUMBER: 125:143622  
TITLE: Polyimides and heat-resistant adhesives using the same  
INVENTOR(S): producing good adhesive strength in bonding at low temperature and pressure  
PATENT ASSIGNEE(S): Ootawa, Juichi; Tamai, Masaji; Yamaguchi, Teruhiko  
SOURCE: Mitsui Toatsu Chemicals, Japan  
Jpn. Kokai Tokkyo Koho, 11 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08134213	A2	19960528	JP 1994-281730	19941116
PRIORITY APPLN. INFO.:			JP 1994-281730	19941116

IT 180155-41-3P 180155-42-4P  
RL: IMP (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyimides and heat-resistant adhesives using the same producing good adhesive strength in bonding at low temperature and pressure)

RN 180155-41-3 CAPLUS  
CM 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with α-[(3-aminopropyl)dimethylsilyl]-ω-[[[(3-aminopropyl)dimethylsilyl]oxy]poly[oxy(dimethylsilylene)] and 3,3'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

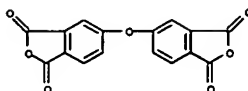
CM 1

CRN 97917-34-5  
CMF (C2 H6 O Si)<sub>n</sub> C10 H28 N2 O Si2  
CCI PMS

CM 2

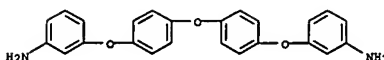
CRN 58883-55-9

CM 3

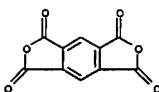
CRN 1823-59-2  
CMF C16 H6 O7

L42 ANSWER 74 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

CMF C24 H20 N2 O3

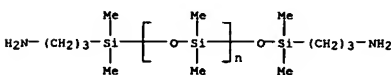


CM 3

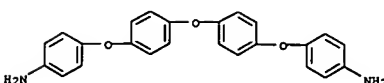
CRN 89-32-7  
CMF C10 H2 O6

RN 180155-42-4 CAPLUS  
CM [5,5'-Bisobenzofuran]-1,1',3,3'-tetrone, polymer with α-[(3-aminopropyl)dimethylsilyl]-ω-[[[(3-aminopropyl)dimethylsilyl]oxy]poly[oxy(dimethylsilylene)] and 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

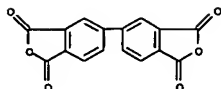
CM 1

CRN 97917-34-5  
CMF (C2 H6 O Si)<sub>n</sub> C10 H28 N2 O Si2  
CCI PMS

CM 2

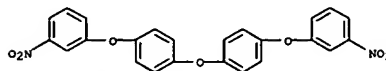
CRN 13080-88-1  
CMF C24 H20 N2 O3

CM 3

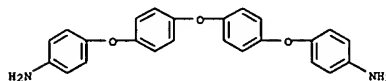
CRN 2420-87-3  
CMF C16 H6 O6

L42 ANSWER 75 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
AB A series of aromatic ether diamines having different nos. of benzene rings, different amino-substituted positions and different moieties in their structures was synthesized. By using these synthesized ether diamines and com. available tetracarboxylic dianhydrides, various kinds of polyimides having almost the same mol. wts. were synthesized. The glass transition temperature (T<sub>g</sub>) values and thermoplasticity were studied by focusing on the chemical structures of their repeating structure units. T<sub>g</sub> and melt-processibility of polyimide depended on the chain length and meta-linkage contents of ether diamine, and the difference of amino substituted position in ether diamine.

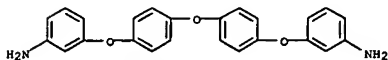
ACCESSION NUMBER: 1996:507451 CAPLUS  
DOCUMENT NUMBER: 125:222625  
TITLE: Melt processible polyimides and their chemical structures  
AUTHOR(S): Tamai, S.; Yamaguchi, A.; Ohta, M.  
CORPORATE SOURCE: Central Res. Inst., Mitsui Toatsu Chemicals Inc., Yokohama, Japan  
SOURCE: Polymer (1996), 37(16), 3683-3692  
CODEN: POLMAG; ISSN: 0032-3861  
PUBLISHER: Elsevier  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
IT 105113-04-0P, 4,4'-Bis(3-nitrophenoxy)diphenyl ether  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(intermediate; preparation of melt processible polyimides and their chemical structures)  
RN 105113-04-0 CAPLUS  
CN Benzene, 1,1'-oxybis[4-(3-nitrophenoxy)- (9CI) (CA INDEX NAME)]



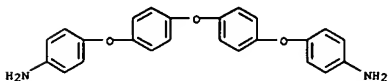
IT 13080-88-1P 58883-55-9P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(monomer; preparation of melt processible polyimides and their chemical structures)  
RN 13080-88-1 CAPLUS  
CN Benzenamine, 4,4'-[oxybis(4,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)]



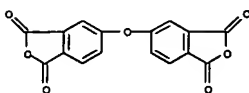
RN 58883-55-9 CAPLUS  
CN Benzenamine, 3,3'-[oxybis(4,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)]



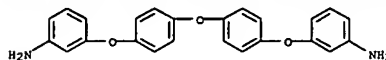
IT 53938-96-8P 58883-56-0P 110281-79-3P  
181709-10-4P 181709-21-7P 181709-29-5P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(preparation of melt processible polyimides and their chemical structures)  
RN 53938-96-8 CAPLUS  
CN 1,3-Isobenzofurandione, 5,5'-oxybis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)]  
CM 1  
CRN 13080-88-1  
CMF C24 H20 N2 O3



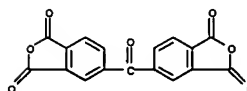
CM 2

CRN 1823-59-2  
CMF C16 H6 O7

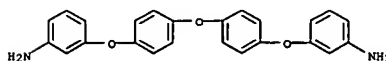
RN 58883-56-0 CAPLUS  
CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with 3,3'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)]  
CM 1  
CRN 58883-55-9  
CMF C24 H20 N2 O3



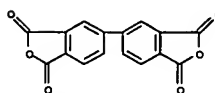
CM 2

CRN 2421-28-5  
CMF C17 H6 O7

RN 110281-79-3 CAPLUS  
CN [5,5'-Bisobenzofuran]-1,1',3,3'-tetrone, polymer with 3,3'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)]  
CM 1  
CRN 58883-55-9  
CMF C24 H20 N2 O3

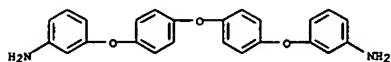


CM 2

CRN 2420-87-3  
CMF C16 H6 O6

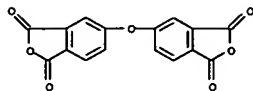
RN 181709-10-4 CAPLUS  
CN 1,3-Isobenzofurandione, 5,5'-oxybis-, polymer with 3,3'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)]  
CM 1  
CRN 58883-55-9

L42 ANSWER 75 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)  
 CMF C24 H20 N2 O3



CM 2

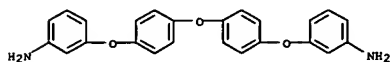
CRN 1823-59-2  
 CMF C16 H6 O7



RN 181709-21-7 CAPLUS  
 CM 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with  
 3,3'-(oxybis(4,1-phenyleneoxy))bis(benzenamine) (9CI) (CA INDEX NAME)

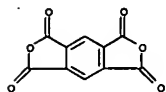
CM 1

CRN 58883-55-9  
 CMF C24 H20 N2 O3



CM 2

CRN 89-32-7  
 CMF C10 H2 O6



RN 181709-29-5 CAPLUS  
 CM 1,3-Isobenzofurandione, 5,5'-(1,4-phenylenebis(oxy))bis-, polymer with  
 3,3'-(oxybis(4,1-phenyleneoxy))bis(benzenamine) (9CI) (CA INDEX NAME)

L42 ANSWER 76 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB The dam-bars binding external terminals for the title lead frames are  
 made of solvent-soluble fluoropolymers or polyimides. The use of the polymer  
 dam-bar materials prevents damages on the external terminals during  
 separation of the frames in the manufacturing

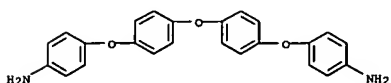
ACCESSION NUMBER: 1996:303782 CAPLUS  
 DOCUMENT NUMBER: 124:330329  
 TITLE: Semiconductor device lead frames having polymer  
 dam-bars  
 INVENTOR(S): Igarashi, Kazumasa  
 PATENT ASSIGNEE(S): Nitto Denko Corp, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.  
 CODEN: JKOQAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08046126	A2	19960216	JP 1994-183731	19940804
PRIORITY APPLN. INFO.:			JP 1994-183731	19940804

IT 72356-17-3  
 RL: DEV (Device component use); POF (Polymer in formulation); PRP  
 (Properties); USES (Uses)  
 (polymer dam-bars for lead-frames in semiconductor devices)  
 RN 72356-17-3 CAPLUS  
 CM 1,3-Isobenzofurandione, 5,5'-sulfonylbis-, polymer with  
 4,4'-(oxybis(4,1-phenyleneoxy))bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1

CRN 13080-88-1  
 CMF C24 H20 N2 O3

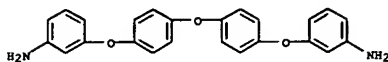


CM 2

CRN 2540-99-0  
 CMF C16 H6 O8 S

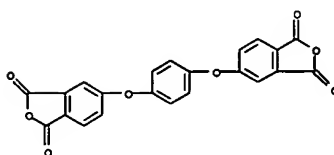
L42 ANSWER 75 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)  
 CM 1

CRN 58883-55-9  
 CMF C24 H20 N2 O3

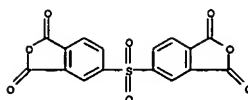


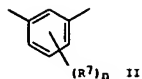
CM 2

CRN 17828-53-4  
 CMF C22 H10 O8



L42 ANSWER 76 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)





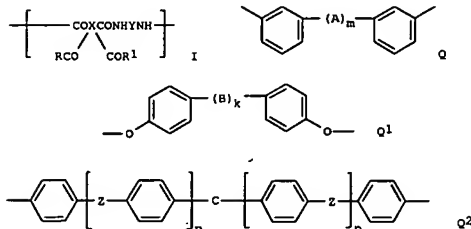
AB In the title compns. containing (A) aromatic polyimide precursor polymers with amide bond concentration  $\geq 1.5$  mol/kg containing repeating units  $C(O)X(C(O)R)[C(O)R]_n$  (I; X = hexavalent F-free aromatic group or hexavalent organic group with chemical structures of 2-4 F-free aromatic group bonded via  $\geq 1$  bond selected from single bonds, ether, thioether, carbonyl, methylene, sulfoxide, sulfone; COR, CORA, and CONH are ortho position from each other; R, Ra = OR1, NHR2, O-N-R3R4R5R6, OH; R1-3 = organic group containing ethylenic unsatd. bonds at least on the parts; R4-6 = H, Cl-6 hydrocarbon; at least a part of R and Ra are residues other than OH; Y = F-free divalent aromatic group, F-free divalent organic group with chemical structures of 2-6 aromatic groups which are bonded to each other via  $\geq 1$  bonds selected from ether, thioether, carbonyl, methylene, 2,2-propylene, sulfoxide, and sulfone), (B) photopolym. initiators, and (C) solvents, Y in the aromatic polyimide precursor polymers are divalent groups II (R7 = Cl-4 aliphatic hydrocarbon; n = 0-3) and light absorption at wavelength 365 nm of the films formed after application of the compns. followed by drying are  $\leq 1.5$  per film thickness 10  $\mu m$ . The pattern formation method comprise (i) applying the photosensitive compns. to substrates, (ii) exposing to i-ray, (iii) removing the undeveloped parts with developers, and (i.v.) heat treating the obtained patterns.

ACCESSION NUMBER: 1996:294984 CAPLUS  
DOCUMENT NUMBER: 125:45116  
TITLE: Photosensitive aromatic polyimide precursor compositions and polyimide pattern formation method  
INVENTOR(S): Matsuo, Yoshiro; Yokota, Kanichi; Kataoka, Yasuhiro  
PATENT ASSIGNEE(S): Asahi Chemical Ind, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 34 pp.  
CODEN: JKOXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08050354	A2	19960220	JP 1995-145143	19950522
JP 2826979	B2	19981118		

PRIORITY APPLN. INFO.: JP 1995-145143 19950522

IT 178040-28-3P, Bis[4-(4-aminophenoxy)phenyl] ether-3,3',4,4'-diphenyl sulfone tetracarboxylic dianhydride-2-isocyanatoethyl methacrylate copolymer  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material)



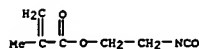
AB The compns. contain (A) aromatic polyamide precursor with amide bond concentration  $\geq 1.5$  mol/kg having a repeating unit I [X = tetravalent aromatic group containing no F, tetravalent organic group comprising 2-4 aromatic group containing no F linked each other through  $\geq 1$  bond selected from direct bond, O, S, CO, CH2, SO, SO2; COR and COR1 are on the ortho position against CONH; R, R1 = NHR2, O-N-R3R4R5R6, OH (R2-3 = ethylenic unsatd. group; R4-6 = H, Cl-6 hydrocarbon); R and R1 in at least a part of the repeating unit = group other than OH; Y = divalent arylene containing no F, divalent organic group comprising 2-6 aromatic group containing no F linked each other through  $\geq 1$  bond selected from direct bond, O, S, CO, CH2, CMe2, SO, SO2] (B) photopolym. initiators, and (C) solvents, and (i) the amide bond concentration is  $\geq 2.42$  mol/kg and/or (ii) X = tetravalent group substituted with aprotic electron-donating group, and/or (iii) Y = Q [A = CH2, CO, SO2, O, S, m-OC6H4O, p-OC6H4O, Q1 (B has the same definition as A; k = 0, 1); m = 0, 1], Q2 (C = SO2, SO, CO; p = 0, 1, 2; Z = O, CH2, CMe2), or divalent aromatic group substituted with aprotic electron-donating group and absorbance of a film obtained by coating with the photoresist compns. and drying is  $\leq 1.5/10 \mu m$  at 365 nm. A method for the polyimide pattern formation using the above compns. is also claimed. The compns. provide polyimide patterns in high resolution by i-line exposure in photolithog. process for manufacture of semiconductor devices.

ACCESSION NUMBER: 1996:248355 CAPLUS  
DOCUMENT NUMBER: 124:356223  
TITLE: Photoresist compositions for i-line exposure  
INVENTOR(S): Matsuo, Yoshiro; Yokota, Kanichi; Kataoka, Yasuhiro  
PATENT ASSIGNEE(S): Asahi Chemical Ind, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 35 pp.  
CODEN: JKOXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese

RM 178040-28-3 CAPLUS  
CN 2-Propenoic acid, 2-methyl-, 2-isocyanatoethyl ester, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] and 5,5'-sulfonylbis[1,3-isobenzofurandione] (9CI) (CA INDEX NAME)

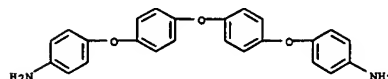
CM 1

CRN 30674-80-7  
CMF C7 H9 N O3



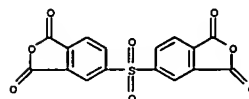
CM 2

CRN 13080-88-1  
CMF C24 H20 N2 O3



CM 3

CRN 2540-99-0  
CMF C16 H6 O8 S



PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08036264	A2	19960206	JP 1995-145134	19950522
JP 2826978	B2	19981118		

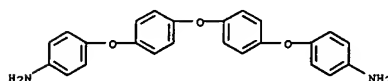
PRIORITY APPLN. INFO.: JP 1995-145134 19950522

IT 72356-17-3DP, reaction products with diethylaminoethyl methacrylate  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material)  
use); PREP (Preparation); USES (Uses)  
(photoresist compns. containing polyamic acids for i-line exposure providing heat-resistant polyimide film)

RM 72356-17-3 CAPLUS  
CN 1,3-isobenzofurandione, 5,5'-sulfonylbis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

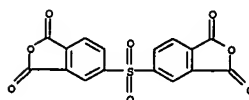
CM 1

CRN 13080-88-1  
CMF C24 H20 N2 O3



CM 2

CRN 2540-99-0  
CMF C16 H6 O8 S



L42 ANSWER 79 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN

AB We investigated relations between diffusivities in polyimides and phys. parameters with mobilities of segments and examined viscoelasticity of polyimides on introducing the parameter as an index of mobilities of polymer chains. Each relaxation temperature of viscoelasticities on polyimide

films having ordered regions was almost the same as that in the amorphous states. The CF<sub>3</sub> group as a substituent showed an effect similar to that of the CH<sub>3</sub> group in elastic relaxation. For relations between the diffusion coeffs. and cohesive-energy densities (CED) which were introduced as an index of cohesiveness of segments, the relation between CED and the gas diffusivities showed a good correlation. Mobilities of segments affected strongly the gas diffusivities even in the glassy polymers such as polyimides.

ACCESSION NUMBER: 1996:186807 CAPIUS

DOCUMENT NUMBER: 124:318592

TITLE: Relation of gas permeability with structure of aromatic polyimides II  
AUTHOR(S): Hirayama, Y.; Yoshinaga, T.; Kusuki, Y.; Ninomiya, K.;

Sakakibara, T.; Tameri, T.

CORPORATE SOURCE: Chiba Laboratory, UBE Industries, Ltd., 8-1, Goi-Minamikaigan, Ichihara, Chiba, 290, Japan

SOURCE: Journal of Membrane Science (1996), 111(2), 183-92

CODEN: JMESDO; ISSN: 0376-7388

PUBLISHER: Elsevier

DOCUMENT TYPE: Journal

LANGUAGE: English

IT 72356-19-5 176315-62-1

RL: PRP (Properties)

(diffusion and permeation and thermal properties of polyimides as a function of structure)

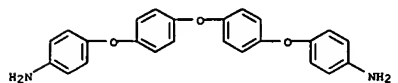
RN 72356-19-5 CAPIUS

CN [5,5'-Bis(isobenzofuran)-1,1',3,3'-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1

CRN 13080-88-1

CMF C24 H20 N2 O3



CM 2

CRN 2420-87-3

CMF C16 H6 O6

L42 ANSWER 80 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN

AB We examined the relation of gas permeabilities, diffusivities, and solubilities with the structures in various polyimide films.

Permeability coeffs. (P) and diffusion coeffs. (D) of polyimides were measured by the use of the high-vacuum time-lag method. Glass transitions, d-spacings, and densities of polyimides were determined from the data with differential scanning calorimetry, a wide-angle X-ray diffraction, and a d-gradient column method, resp. The films tested were made from 32 kinds of polyimides, which were synthesized from the reactions of various diamines containing biphenyl, diphenylmethane, Ph ether, di-Ph sulfone, or di-Ph sulfide structures with BPDA, 6FDA, or PMDA. The effect of ordered region

in polyimide films on gas diffusivities were also examined. A number of polyimide films gave the decreased diffusivities and solubilities due to the occurrence of ordered region when they were annealed over glass transition temps. We discussed especially diffusivities and structures of

amorphous states of other polyimides except for these polyimides having ordered region. Furthermore, the relation of D having large effect on permeability, with phys. parameters, such as d-spacings and fractional free vols. (Vf), was examined in amorphous state. However, we could not find good correlations between ln D and d-spacing or Vf-1. These poor correlations were observed in polyimides containing polar substituents.

The results show that the gas diffusion of glassy polymers may not be interpreted only in terms of total free space or mean-segment distance.

ACCESSION NUMBER: 1996:186806 CAPIUS

DOCUMENT NUMBER: 124:318591

TITLE: Relation of gas permeability with structure of aromatic polyimides I  
AUTHOR(S): Hirayama, Y.; Yoshinaga, T.; Kusuki, Y.; Ninomiya, K.;

Sakakibara, T.; Tameri, T.

CORPORATE SOURCE: Chiba Laboratory, UBE Industries, Ltd., 8-1, Goi-Minamikaigan, Ichihara, Chiba, 290, Japan

SOURCE: Journal of Membrane Science (1996), 111(2), 169-82

CODEN: JMESDO; ISSN: 0376-7388

PUBLISHER: Elsevier

DOCUMENT TYPE: Journal

LANGUAGE: English

IT 72356-19-5 176315-62-1

RL: PRP (Properties)

(diffusion and permeation and thermal properties of polyimide

membranes as a function of structure)

RN 72356-19-5 CAPIUS

CN [5,5'-Bis(isobenzofuran)-1,1',3,3'-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

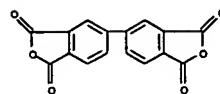
CM 1

CRN 13080-88-1

CMF C24 H20 N2 O3

L42 ANSWER 79 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN

(Continued)



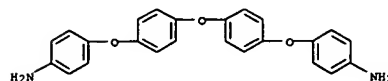
RN 176315-62-1 CAPIUS

CN 1,3-Isobenzofurandione, 5,5'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1

CRN 13080-88-1

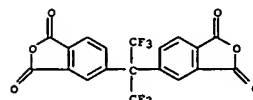
CMF C24 H20 N2 O3



CM 2

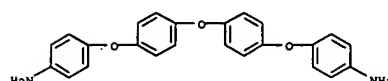
CRN 1107-00-2

CMF C19 H6 F6 O6



L42 ANSWER 80 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN

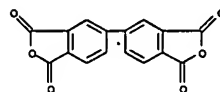
(Continued)



CM 2

CRN 2420-87-3

CMF C16 H6 O6



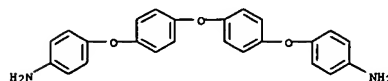
RN 176315-62-1 CAPIUS

CN 1,3-Isobenzofurandione, 5,5'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1

CRN 13080-88-1

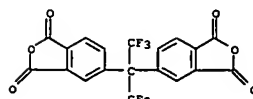
CMF C24 H20 N2 O3



CM 2

CRN 1107-00-2

CMF C19 H6 F6 O6

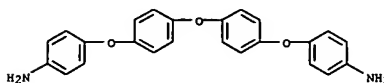


L42 ANSWER 81 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB Disclosed is a thermal recording material having, on a support, a heat-sensitive coloring layer containing an electron-donating colorless dye, an isocyanate compound and an amino compound. The storage stability of the raw stock material as well as the color image stability of the material are excellent.

ACCESSION NUMBER: 1996:87455 CAPLUS  
 DOCUMENT NUMBER: 124:160499  
 TITLE: Thermal recording material  
 INVENTOR(S): Kawakami, Hiroshi; Nozaki, Chiyoshi; Iwakura, Ken  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: U.S., 7 pp. Cont.-in-part of U.S. 5, 288, 688.  
 CODEN: USXGAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5464804	A	19951107	US 1993-128662	19930930
JP 06048041	A2	19940222	JP 1992-286873	19920930
JP 2960266	B2	19991006		
US 5288688	A	19940222	US 1993-36390	19930324
PRIORITY APPLN. INFO.:			JP 1992-66212	A 19920324
			JP 1992-286873	A 19920930
			US 1993-36390	A2 19930324

OTHER SOURCE(S): MARPAT 124:160499  
 IT 13080-88-1, Bis(4-(4-aminophenoxy)phenyl)ether  
 RL: DEV (Device component use); USES (Uses)  
 (thermal recording material)  
 RN 13080-88-1 CAPLUS  
 CN Benzenamine, 4,4'-[oxybis(4,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)



L42 ANSWER 82 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN

AB A dicarboxylic acid bearing two phthalimide rings was prepared by the condensation of N-phenyl-3,3-bis[4-(4-aminophenoxy)phenyl]phthalimidine and trimellitic anhydride. A new family of poly(amide-imide)s having inherent viscosities 0.65-1.65 dL/g was prepared by the tri-Ph phosphite activated polycondensation of the diimide-diacid with various aromatic diamines in a medium consisting of N-methyl-2-pyrrolidone (NMP), pyridine, and calcium chloride. All the resulting polymers showed an amorphous nature and were readily soluble in polar solvents such as NMP and N,N-dimethylacetamide. The soluble poly(amide-imide)s afforded transparent, flexible, and tough films. The glass transition temps. of these polymers were in the range 249-340° and the 10% weight loss temps. were >545° in nitrogen.

ACCESSION NUMBER: 1995:990331 CAPLUS  
 DOCUMENT NUMBER: 124:56877  
 TITLE: New poly(amide-imide)s syntheses. 17. Preparation and properties of poly(amide-imide)s derived from

N-phenyl-3,3-bis[4-(4-aminophenoxy)phenyl]phthalimidine, trimellitic anhydride, and various aromatic diamines  
 AUTHOR(S): Yang, Chin-Ping; Lin, Jiun-Hung  
 CORPORATE SOURCE: Department of Chemical Engineering, Tatung Institute of Technology, Taipei, Taiwan  
 SOURCE: Polymer International (1995), 38(4), 335-42  
 CODEN: PLVIEI; ISSN: 0959-8103  
 PUBLISHER: Wiley  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

IT 171828-29-8P 171828-30-1P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation and properties of poly(amide-imide)s derived from N-phenyl-3,3-bis[4-(4-aminophenoxy)phenyl]phthalimidine, trimellitic anhydride, and aromatic diamines)

RN 171828-29-8 CAPLUS  
 CN 1H-Indole-5-carboxylic acid, 2,2'-[2,3-dihydro-3-oxo-2-phenyl-1H-isoindol-1-ylidene]bis(4,1-phenyleneoxy-4,1-phenylene)]bis[2,3-dihydro-1,3-dioxo-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI)

(CA INDEX NAME)

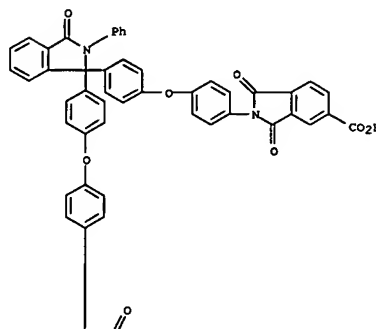
CM 1

CRN 153404-79-6

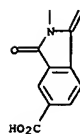
CMF C56 H33 N3 O11

L42 ANSWER 82 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

PAGE 1-A



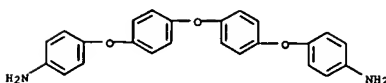
PAGE 2-A



CM 2

CRN 13080-88-1

CMF C24 H20 N2 O3

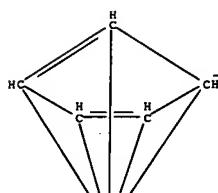


RN 171828-30-1 CAPLUS

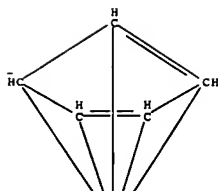
```
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *
```

L42 ANSWER 83 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

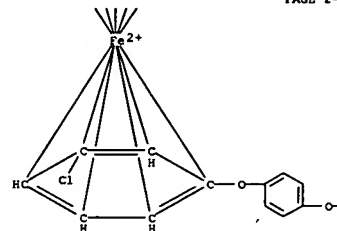
PAGE 1-A



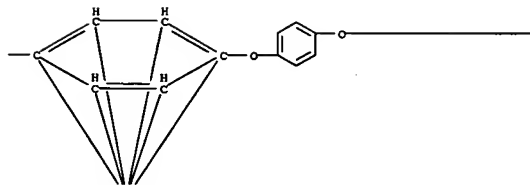
PAGE 1-C



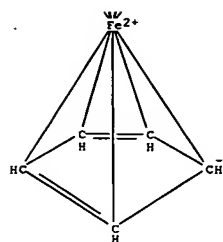
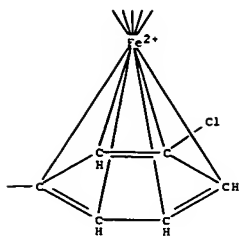
PAGE 2-A



PAGE 2-B



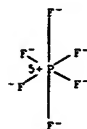
PAGE 2-C



CM 2

CRN 16919-18-9  
 CMF F6 P  
 CCI CCS

PAGE 3-B

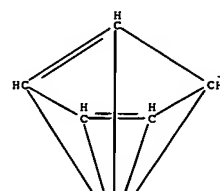


RN 172793-93-0 CAPLUS  
 CN Iron(3+), [ $\mu^3$ -[ $\eta^6$ : $\eta^6$ : $\eta^6$ -1,4-bis[4-(4-chlorophenoxy)phenoxy]benzene]]tris[ $\eta^5$ -2,4-cyclopentadien-1-yl]tri-, tris[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

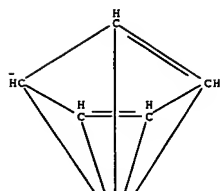
CM 1

CRN 172793-92-9  
 CMF C45 H35 Cl2 Fe3 O4  
 CCI CCS

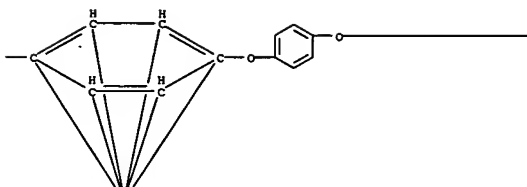
PAGE 1-A



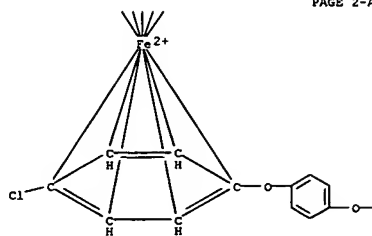
PAGE 1-C



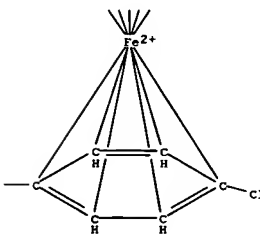
PAGE 2-B



PAGE 2-A

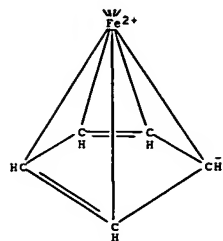


PAGE 2-C

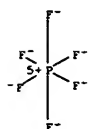




PAGE 3-B



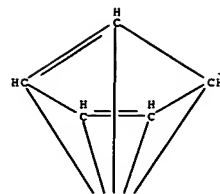
CM 2

 CRN 16919-18-9  
 CMF F6 P  
 CCI CCS

 RN 172794-17-1 CAPLUS  
 CN Iron(4+), [μ4-{η6:η6:η6:η6-1,4-bis[4-(4-(4-chlorophenoxy)phenoxy)phenoxyl]benzene}]tetrakis(η5-2,4-cyclopentadien-1-yl)tetra-, tetrakis[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

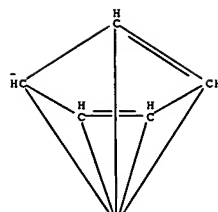
CM 1

 CRN 172794-16-0  
 CMF C62 H48 Cl2 Fe4 O6  
 CCI CCS

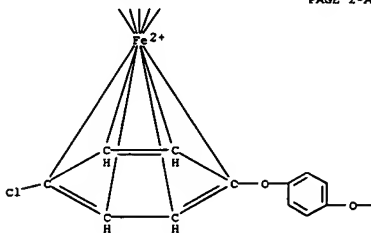
PAGE 1-A



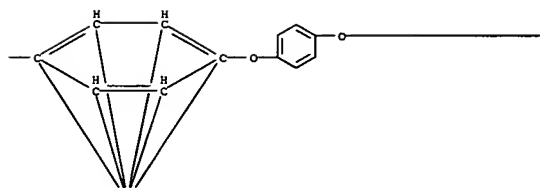
PAGE 1-D



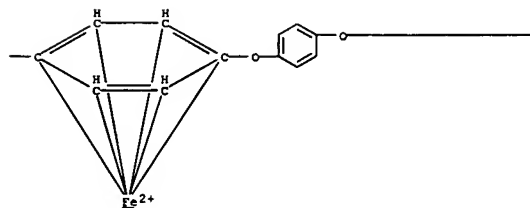
PAGE 2-A



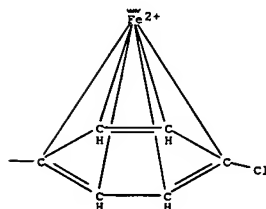
PAGE 2-B



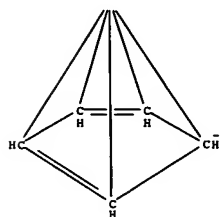
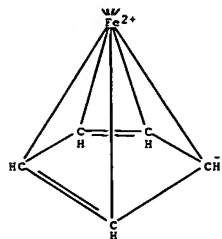
PAGE 2-C



PAGE 2-D

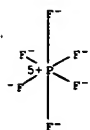


PAGE 3-B

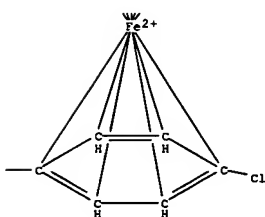
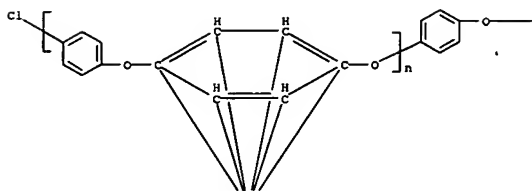


CM 2

CRN 16919-18-9  
 CMF F6 P  
 CCI CCS



PAGE 2-A



PAGE 2-B

RN 172794-31-9 CAPLUS

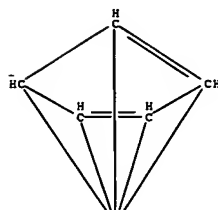
CM Poly(oxy-1,4-phenylene),  $\alpha$ -(4-chlorophenyl)- $\alpha$ -(4-chlorophenoxy)-, ( $\eta^5$ -2,4-cyclopentadien-1-yl)iron(1+) hexafluorophosphate(1-) complex (9CI) (CA INDEX NAME)

CM 1

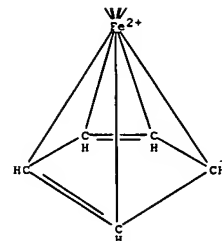
CRN 172794-30-8

CMF (C17 H13 Fe O2)n C17 H13 Cl2 Fe O  
 CCI CCS, PMS

PAGE 1-B

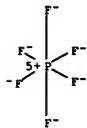


PAGE 3-A



CM 2

CRN 16919-18-9  
 CMF F6 P  
 CCI CCS



RN 173741-28-1 CAPLUS

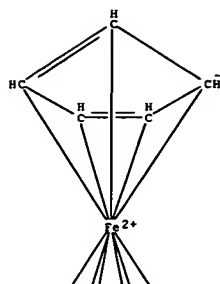
CM Iron(5+), [ $\mu^5$ -[ $\eta^6$ : $\eta^6$ : $\eta^6$ : $\eta^6$ : $\eta^6$ : $\eta^6$ -1,4-bis[4-(4-(4-(4-chlorophenoxy)phenoxy)phenoxy)phenoxy]benzene]pentakis( $\eta^5$ -2,4-cyclopentadien-1-yl)]penta-, pentakis[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

CM 1

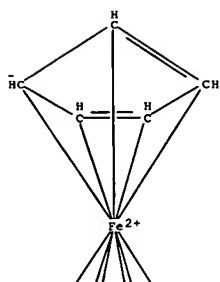
CRN 173741-27-0

CMF C79 H61 Cl2 Fe5 O8  
 CCI CCS

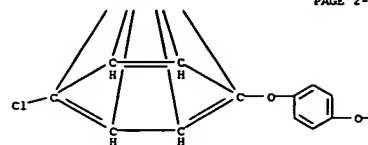
PAGE 1-A



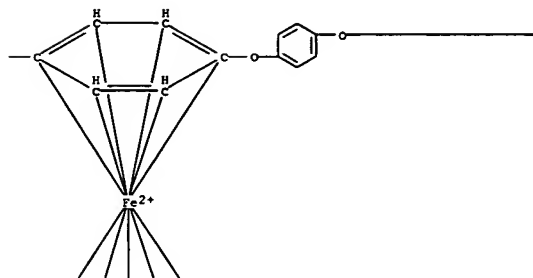
PAGE 1-E



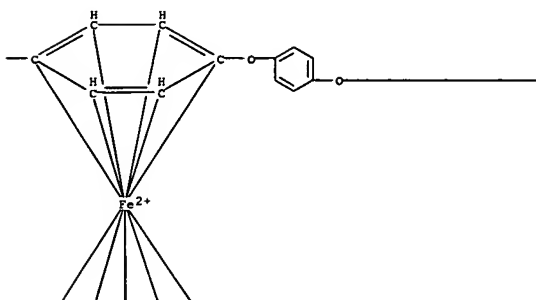
PAGE 2-A



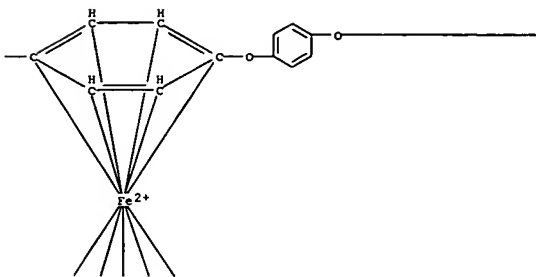
PAGE 2-B



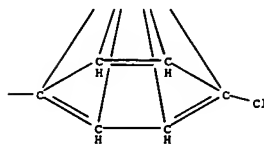
PAGE 2-C



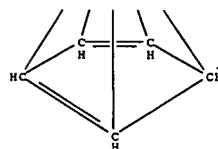
PAGE 2-D



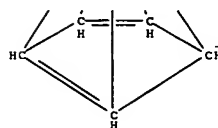
PAGE 2-E



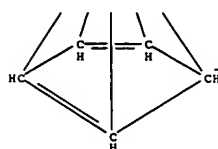
PAGE 3-B



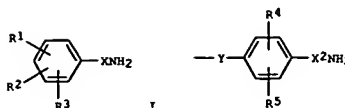
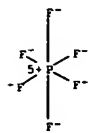
PAGE 3-C



PAGE 3-D



CRN 16919-18-9  
CMF F6 P  
CCI CCS

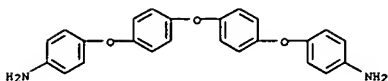


AB The material comprises a support coated with a thermal coloring layer containing an electron-donating colorless dye, a thioisocyanate compound, and an amino compound. The thioisocyanate compound may be a  $\geq 2$ -NCS-containing aromatic thioisocyanate. The amino compound may be an aromatic derivative I (X = none, CO, SO<sub>2</sub>, CONH, SO<sub>2</sub>NH; R1-3 = H, alkyl, aryl, alkoxy, aryloxy, carbamoyl, sulfamoyl, acyl, halo, NO<sub>2</sub>, CN, OH, CONHNH<sub>2</sub>, SO<sub>2</sub>NHNH<sub>2</sub>; Q: Y = bivalent group; R4, R5 = H, alkyl, aryl, alkoxy, sulfonyl, halo, NO<sub>2</sub>, CN; X2 = none, CO, SO<sub>2</sub>, CONH, SO<sub>2</sub>NH). The material shows good chemical resistance and gives high-d. images.

ACCESSION NUMBER: 1995:865087 CAPLUS  
DOCUMENT NUMBER: 123:325798  
TITLE: Thermal recording material containing thioisocyanate and amino compound  
INVENTOR(S): Kawakami, Hiroshi  
PATENT ASSIGNEE(S): Fuji Photo Film Co Ltd, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
CODEN: JFOOAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07205553	A2	19950808	JP 1994-908	19940110
PRIORITY APPLN. INFO.:			JP 1994-908	19940110

OTHER SOURCE(S): MARPAT 123:325798  
IT 13080-88-1, Bis[4-(4-aminophenoxy)phenyl] ether  
RL: DEV (Device component use); USES (Uses)  
(Thermal recording material containing thioisocyanate and amino compound)  
RN 13080-88-1 CAPLUS  
CN Benzenamine, 4,4'-[oxybis(4,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)



\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

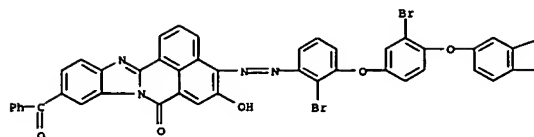
AB The title photoreceptors comprise a conductive support coated with a photosensitive layer containing a bisazo compound I (K1, K2 = OH-containing coupler residue having a group with coupling ability, 1 of K1 and K2 is II (Y = divalent N-contg heterocycle which may be substituted, divalent aromatic hydrocarbon which may be substituted); X = divalent group having  $\geq 2$  groups selected from III and IV; R1, R2 = H, halo, (substituted) alkyl, (substituted) alkoxy, (substituted) aryl; the benzene rings A, B, and C may have substituents). The photoreceptors show high photosensitivity and good durability in repeated use. Thus, an Al vapor-deposited polyester film was coated with a charge-generating layer containing V and with a charge-transporting layer containing a hydrazone compound to give a photoreceptor.

ACCESSION NUMBER: 1995:849478 CAPLUS  
DOCUMENT NUMBER: 124:215963  
TITLE: Electrophotographic photoreceptors using novel bisazo compound  
INVENTOR(S): Rin, Mamoru; Tanaka, Noriko  
PATENT ASSIGNEE(S): Mitsubishi Kagaku KK, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JFOOAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

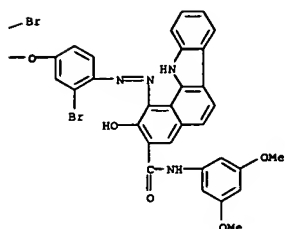
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07168378	A2	19950704	JP 1993-316552	19931216
PRIORITY APPLN. INFO.:			JP 1993-316552	19931216

IT 170588-34-8 170893-87-5 170893-88-6  
170893-93-3  
RL: DEV (Device component use); USES (Uses)  
(electrophotog. photoreceptor containing bisazo compound as charge-generating agent)  
RN 170588-34-8 CAPLUS  
CN 11H-Benzo[a]carbazole-3-carboxamide,  
1-[[4-[4-[4-[3-[(10-benzoyl-5-hydroxy-7-oxo-7H-benzimidazo[2,1-a]benz[de]isoquinolin-4-yl)azo]-2-bromophenoxy]-2-bromophenoxy]-2-bromophenoxy]-2-bromophenyl]azo]-N-(3,5-dimethoxyphenyl)-2-hydroxy- (9CI) (CA INDEX NAME)

PAGE 1-A

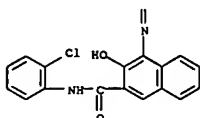


PAGE 1-B



RN 170893-87-5 CAPLUS  
 CN 2-Naphthalenecarboxamide, N-(2-chlorophenyl)-3-hydroxy-4-[[3-[4-[4-[4-[4-hydroxy-9-(10-,11 or 12)-methyl-7-oxo-7H-benzimidazo[2,1-a]benz[de]isoquinolin-6-yl]azo]phenoxy]phenoxy]phenoxy]phenyl]azo]- (9CI) (CA INDEX NAME)

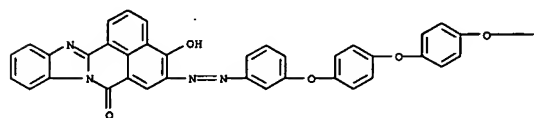
PAGE 3-A



D1=Me

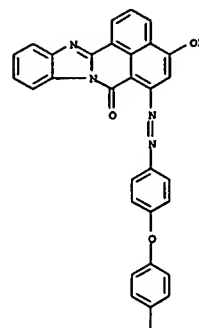
RN 170893-88-6 CAPLUS  
 CN 2-Naphthalenecarboxamide, N-(2-chlorophenyl)-3-hydroxy-4-[[3-[4-[4-[4-[4-hydroxy-9-(10-,11 or 12)-methyl-7-oxo-7H-benzimidazo[2,1-a]benz[de]isoquinolin-6-yl]azo]phenoxy]phenoxy]phenoxy]phenyl]azo]- (9CI) (CA INDEX NAME)

PAGE 1-A

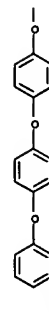


D1=Me

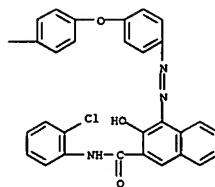
PAGE 1-A



PAGE 2-A

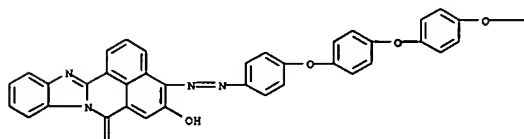


PAGE 1-B

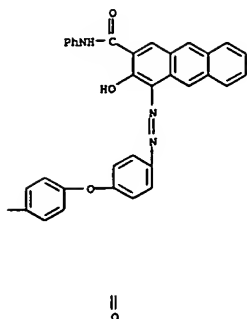


RN 170893-93-3 CAPLUS  
 CN 2-Anthracenecarboxamide, 4-[[4-[4-[4-[4-[4-[9-(10-,11 or 12)-chloro-5-hydroxy-7-oxo-7H-benzimidazo[2,1-a]benz[de]isoquinolin-4-yl]azo]phenoxy]phenoxy]phenoxy]phenyl]azo]-3-hydroxy-N-phenyl- (9CI) (CA INDEX NAME)

PAGE 1-A



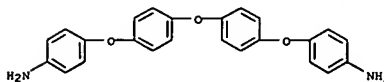
PAGE 1-B



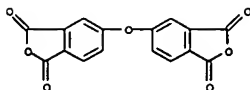
D1-C1

PAGE 2-A

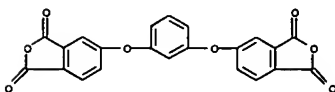
L42 ANSWER 86 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB Polyetherimides (PEI) based on dianhydrides of 3,3',4,4'-diphenyloxytetracarboxylic acid and 1,3-bis(3,4-dicarboxyphenoxy)benzene that contain fragments of such thermoplastic polymers as poly(ether sulfone) or poly(phenylene oxide) were synthesized. Thermoplastic properties of synthesized PEI were characterized by flow temperature  $T_f$  and melt viscosity  $\eta_{sp}$ . The PEI compns. are film-forming and can flow at temps. 80-100° lower than the onset of thermal degradation. The properties obtained are outstanding for the production of PEI as fusible film binders, and composites can be produced without toxic solvents. Carbon fiber-reinforced plastics (CFRP) based on PEI films were analyzed using as acoustic emission (AE). The thermomech. properties of the composites are improved by subsequent thermal treatment of the polymer at a temperature higher than for processing.  
 ACCESSION NUMBER: 1995:776567 CAPIUS  
 DOCUMENT NUMBER: 123:171177  
 TITLE: Aromatic polyetherimides as promising fusible film binders  
 AUTHOR(S): Svetlichny, V. M.; Zhukova, T. I.; Kudriavtsev, V. V.;  
 CORPORATE SOURCE: Yudin, V. E.; Gubanova, G. N.; Leksovskii, A. M. Inst. Macromol. Compounds, Academy Sci. Russia, St. Petersburg, 199004, Russia  
 SOURCE: Polymer Engineering and Science (1995), 35(16), 1321-4  
 CODEN: PYESA2; ISSN: 0032-3888  
 PUBLISHER: Society of Plastics Engineers  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 53938-96-0P 74951-98-7P  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process) (characterization of polyether polyimides for fusible film binders)  
 RN 53938-96-8 CAPIUS  
 CN 1,3-isobenzofurandione, 5,5'-oxybis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3



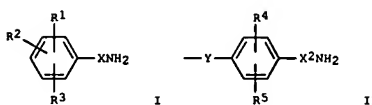
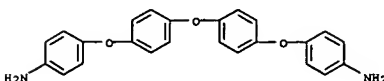
CM 2  
 CRN 1823-59-2



RN 74951-98-7 CAPIUS  
 CN 1,3-isobenzofurandione, 5,5'-[1,3-phenylenebis(oxy)]bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 18959-92-7  
 CMF C22 H10 O8



CM 2  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3

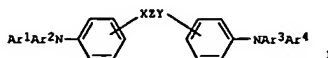
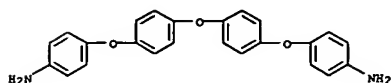


AB A thermal recording material, comprising a support coated with a heat-sensitive layer containing an electron-donating colorless dye, an aromatic isocyanate compound, and an amino compound, is thermally recorded followed by fixing with a chemical substance which reacts with the isocyanate compound to allow it to not show the color developing ability substantially. The amino compound may be I [X = bond, CO, SO2, CONH, SO2NH; R1-3 = H, alkyl, aryl, alkoxy, aryloxy, sulfonyloxy, oxycarbonyl, carbamoyl, sulfamoyl, oxysulfonyl, acyl, sulfonyl, halo, nitro, cyano, hydroxy, CONH2, SO2NH2, CONHNH2, SO2NHNH2, II (Y = divalent group; R4, R5 = H, alkyl, aryl, alkoxy, acyl, sulfonyl, halo, nitro, cyano; X2 = bond, CO, SO2, CONH, SO2NH (these groups may be substituted), R1 and R2 and R4 and R5 may form a ring)]. This method is capable of fixing thermal recording materials with high coloring properties. Thus, a paper support with a heat-sensitive layer containing 2-anilino-3-methyl-6-N-methyl-N-n-propylaminofluoran, 4,4',4"-triisocyanate-2,5-dimethoxytriphenylamine, and bis[4-(4-aminophenoxy)phenyl] ether was thermally recorded and then fixed by coating with a solution of tetraethylenepentamine.

ACCESSION NUMBER: 1995:773122 CAPIUS  
 DOCUMENT NUMBER: 123:242092  
 TITLE: Fixing of thermal recording materials  
 INVENTOR(S): Kawakami, Hiroshi  
 PATENT ASSIGNEE(S): Fuji Photo Film Co Ltd, Japan  
 SOURCE: Jpn. Kokai Tokyo Koho, 7 pp.  
 CODEN: JKXKAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07144472	A2	19950606	JP 1993-293402	19931124
JP 3168108	B2	20010521		

PRIORITY APPLN. INFO.: JP 1993-293402 19931124  
 OTHER SOURCE(S): MARPAT 123:242092  
 IT 13080-88-1, Bis[4-(4-aminophenoxy)phenyl] ether  
 RL: DEV (Device component use); USES (Uses)  
 (fixing of thermal recording material containing dye and isocyanate compound and amino compound)  
 RN 13080-88-1 CAPIUS



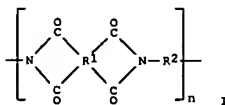
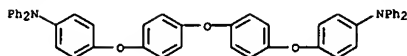
AB The title recording materials, using electron-donating colorless dyes and electron-accepting compds., contain 21 triarylamine derivative I (Ar1-4 = aryl which may be substituted for alkyl, alkenyl, alkynyl, aryl, alkoxy, aryloxy, alkylthio, or arylthio group; X, Y = S, O; Z = ethylene, phenylene, alkanediol). The materials provide images with good lightfastness. Thus, microcapsules containing 2-anilino-3-methyl-6-di-n-butylamino-fluoran and 1,2-bis(p-bis(p-methoxyphenylamino)phenoxy)ethane was coated on a paper support to give a color former sheet, which was

used with a color developer sheet containing Zn 3,5-bis(α-methylbenzyl)salicylate to give a pressure-sensitive copying set.

ACCESSION NUMBER: 1995:677735 CAPLUS  
 DOCUMENT NUMBER: 123:183582  
 TITLE: Recording materials containing triarylamine compound  
 INVENTOR(S): Yanagihara, Naoto; Takashima, Masanobu; Kodama, Tomohiro; Iwakura, Ken  
 PATENT ASSIGNEE(S): Fuji Photo Film Co Ltd, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.  
 CODEN: JFOGAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07089229	AZ	19950404	JP 1994-17620	19940214
US 5480765	A	19960102	US 1994-239126	19940506
PRIORITY APPLM. INFO.:			JP 1993-110490	A 19930512
			JP 1993-108437	A 19930510
			JP 1994-17619	A 19940214
			JP 1994-17620	A 19940214
			JP 1994-31462	A 19940301

IT 167308-83-0  
 RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)  
 (printing material containing triarylamine compound)  
 RN 167308-83-0 CAPLUS  
 CN Benzenamine, 4,4'-[oxybis(4,1-phenyleneoxy)]bis[N,N-diphenyl- (9CI) (CA INDEX NAME)



AB The polyimides, useful for elec. insulating coatings of electronic parts, are represented by I (R1 = 4-valent residue of organic acid containing

≥50 mol% biphenyl ether tetracarboxylic dianhydride; R2 = bivalent residue of diamine containing ≥50 mol% X(p-C6H4O-p-C6H4NH2)2; X = CH2, O, CMe2, SO2, C(CF3)2). Thus, 41.0 g 2,2-bis[4-(4-aminophenoxy)phenyl]propane and 31.0 g 3,3',4,4'-biphenyl ether tetracarboxylic dianhydride were treated at a room temperature for 12 h in N-methyl-2-pyrrolidone to give

a poly(amic acid) solution, which was cast on a glass plate, treated at 100° for 30 min, and imidized at 180° to give a cured product showing 51-weight-loss temperature 520°, water absorption 1.1% after 30-min boiling, volume resistivity 1 + 1016 Ω-cm, and flexural modulus 3.1 GPa.

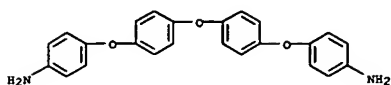
ACCESSION NUMBER: 1995:643702 CAPLUS  
 DOCUMENT NUMBER: 123:231508  
 TITLE: Low-temperature-curable polyimides with excellent heat resistance and flexibility  
 INVENTOR(S): Tsunoda, Mayumi  
 PATENT ASSIGNEE(S): Toshiba Chem Prod, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07090081	AZ	19950404	JP 1993-255279	19930920
PRIORITY APPLM. INFO.:			JP 1993-255279	19930920

IT 168764-96-3P  
 RL: IMP (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (low-temperature-curable polyether-polyimides with good heat resistance and flexibility)  
 RN 168764-96-3 CAPLUS  
 CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 5,5'-oxybis[1,3-isobenzofurandione] and 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

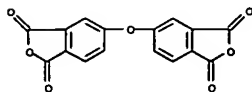
CH 1

CRN 13080-88-1  
CMF C24 H20 N2 O3



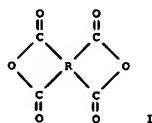
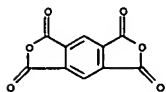
CM 2

CRN 1823-59-2  
CMF C16 H6 O7

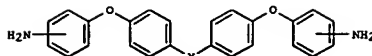


CM 3

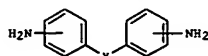
CRN 89-32-7  
CMF C10 H2 O6



I



II



III

AB The thermogenic member is manufactured by coating a foil from stainless steel,

Fe-Ni alloy, Ni-Cr alloy and Cu-Ni alloy with a polyimide insulating layer

on one or both surfaces. The polyimide insulating layer is formed by coating a polyamic acid solution, which is prepared by polymerizing

aromatic tetracarboxylic dianhydride I (R = tetravalent group selected from monocyclic aromatic, condensed polycyclic aromatic, or noncondensed

polycyclic aromatic group) and mixed diamine containing 5-25 mol% aromatic diamine

II (X = bivalent group selected from S, O, sulfone, carbonyl, and isopropylidene) and 75-95 mol% phenylenediamine and III (Y = S, O, sulfone, carbonyl, methylene, ethylene, isopropylidene, or hexafluoroisopropylidene), drying and imidizing.

ACCESSION NUMBER: 1995:582636 CAPIUS

DOCUMENT NUMBER: 122:320159

TITLE: Manufacture of surface thermogenic member having

improved dimensional stability

INVENTOR(S): Ootsubo, Eiji; Oota, Yasuhiko; Narimatsu, Osamu;

Tagawa, Kimiteru; Takemura, Yasuo; Kabetani,

Toshihiko

PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKOQAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07029670	A2	19950131	JP 1993-171421	19930712
JP 3361569	B2	20030107		

PRIORITY APPLN. INFO.: JP 1993-171421 19930712

IT 163488-93-5  
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)

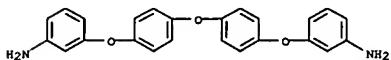
(manufacture of surface heaters from alloy foils and polyimide insulating layers)

RN 163488-93-5 CAPIUS

CN 1H, 3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 1,4-benzenediamine, [5,5'-bis(benzofuran)-1,1',3,3'-tetrone, 4,4'-oxybis(benzenamine) and 3,3'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

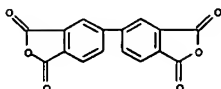
CM 1

CRN 58883-55-9  
CMF C24 H20 N2 O3



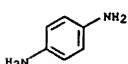
CM 2

CRN 2420-87-3  
CMF C16 H6 O6



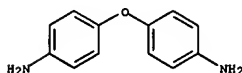
CM 3

CRN 106-50-3  
CMF C6 H8 N2



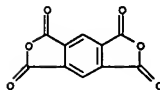
CM 4

CRN 101-80-4  
CMF C12 H12 N2 O



CM 5

CRN 89-32-7  
CMF C10 H2 O6





L42 ANSWER 91 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB The title composition comprises (A) aromatic polyimide precursor with amide bond concentration of 21.5 mol/kg and containing a repeating unit, OCK (COR) CONHYH (X = tetraivalent aromatic containing no F; positions of COR, COR', and CONH are ortho-positions each other; R, R' = OR1, NHR2, O-NR3R4R5R6, OH; R1-3 = organic group containing ethylenic unsatd. bonds; R4-6 = H, C1-6 hydrocarbyl; Y = divalent aromatic containing no F ], (B) photopolym. initiator, and (C) solvent.  
 ACCESSION NUMBER: 1995:570839 CAPLUS  
 DOCUMENT NUMBER: 124:41400  
 TITLE: Photoresist composition for i-line exposure  
 INVENTOR(S): Matsuoka, Yoshio; Yokota, Kanichi; Kataoka, Yasuhiro  
 PATENT ASSIGNEE(S): Asahi Chemical Ind, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 40 pp.  
 CODEN: JIOKAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06342211	A2	19941213	JP 1993-181529	19930722
JP 2826940	B2	19981118		
US 6162580	A	20001219	US 1995-451616	19950526
US 6482569	B1	20021119	US 2000-572203	20000517
			JP 1992-215732	A 19920722
PRIORITY APPLN. INFO.:			JP 1992-273222	A 19921012
			JP 1993-66725	A 19930325
			JP 1993-79504	A 19930406
			US 1993-95783	B1 19930721
			US 1995-451616	A1 19950526

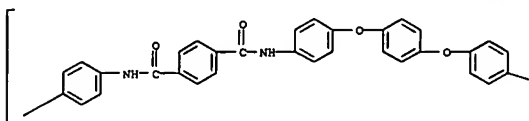
IT 166833-56-3P  
 RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
 (polyimide precursor for i-line exposure)  
 RN 166833-56-3 CAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 2-(diethylamino)ethyl ester, compd. with 4,4'-(oxybis(4,1-phenyleneoxy))bis[benzenamine] polymer with 5,5'-sulfonylbis[1,3-isobenzofurandione] (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 105-16-8  
 CMF C10 H19 N O2

L42 ANSWER 92 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB The title blends, optionally containing vinylpyrrolidone polymers for hydrophilicity, have good mech. properties (e.g., tearing resistance) and are useful for moldings, films, and fibers. A homogeneous blend was prepared from 25 parts sulfonated polyether-polyketone comprising 70 mol units OZ1OZCOZCOZ and 30 mol % units OZOZCOZCOZ and 75 parts polyamide comprising units COZCONH2OZChe2ZOZNH (Z = p-phenylene; Z1 = 2-sulfo-p-phenylene).  
 ACCESSION NUMBER: 1995:437966 CAPLUS  
 DOCUMENT NUMBER: 122:189254  
 TITLE: Homogeneous blends containing aromatic polyamides and sulfonated aromatic polyether-polyketones  
 INVENTOR(S): Helmer-Metzmann, Freddy; Herzmann-Schoenherr, Otto; Kampschulte, Uwe  
 PATENT ASSIGNEE(S): Hoechst A.-G., Germany  
 SOURCE: Eur. Pat. Appl., 18 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

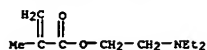
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 604881	A2	19940706	EP 1993-120596	19931221
EP 604881	A3	19940921		
EP 604881	B1	19971112		
R: DE, ES, FR, GB, IT, SE				
ES 2111122	T3	19980301	ES 1993-120596	19931221
JP 06263980	A2	19940920	JP 1993-338056	19931228
JP 3425790	B2	20030714		
US 5510424	A	19960423	US 1995-383620	19950202
PRIORITY APPLN. INFO.:			DE 1992-4244526	A 19921230
			US 1993-173999	B1 19931228

IT 62174-26-9 161739-80-6  
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)  
 (homogeneous blends with sulfonated aromatic polyether-polyketones)  
 RN 62174-26-9 CAPLUS  
 CN Poly(oxy-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenyleneiminocarbonyl-1,4-phenylenecarbonylimino-1,4-phenylene) (9CI) (CA INDEX NAME)

PAGE 1-A

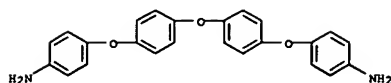


L42 ANSWER 91 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

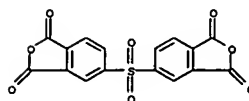


CM 2  
 CRN 72356-17-3  
 CMF [C24 H20 N2 O3 . C16 H6 O8 S]x  
 CCI PMS

CM 3  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3

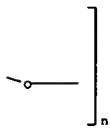


CM 4  
 CRN 2540-99-0  
 CMF C16 H6 O8 S



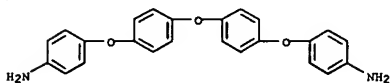
L42 ANSWER 92 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

PAGE 1-B

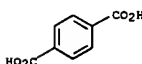


RN 161739-80-6 CAPLUS  
 CN 1,4-Benzenedicarboxylic acid, polymer with 4,4'-(oxybis(4,1-phenyleneoxy))bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3



CM 2  
 CRN 100-21-0  
 CMF C8 H6 O4



AB A dicarboxylic acid (I) was prepared from the condensation of 9,9-bis[4-(4-aminophenoxy)phenyl] fluorene and trimellitic anhydride. A new family of poly(amide-imide)s having inherent viscosities of 0.75-1.04 dL/g was prepared by the tri-Ph phosphite activated polycondensation from the diimide-diacid I with various aromatic diamines in a medium consisting of N-methyl-2-pyrrolidone (NMP), pyridine, and calcium chloride. Most of

the resulting polymers showed an amorphous nature and were readily soluble in polar solvents such as NMP and N,N-dimethylacetamide. All the soluble poly(amide-imide)s afforded transparent, flexible, and tough films. The glass transition temps. of these polymers were in the range of 262-325 °C and the 10% weight loss temps. were above 525 °C in air.

ACCESSION NUMBER: 1995:139717 CAPLUS

DOCUMENT NUMBER: 122:10854

TITLE: New poly(amide-imide) syntheses. XII. Preparation and properties of poly(amide-imide)s based on the diimide-diacid condensed from 9,9-bis[4-(4-aminophenoxy)phenyl] fluorene and trimellitic anhydride

AUTHOR(S): Yang, Chin-Ping; Lin, Jiun-Hung  
CORPORATE SOURCE: Department Chemical Engineering, Tatung Institute Technology, Taiwan, Taiwan

SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry

(1994), 32(14), 2653-62

CODEN: JPACEC; ISSN: 0887-624X

DOCUMENT TYPE: Journal

LANGUAGE: English

IT 159154-88-8 159154-89-9

RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)  
(preparation and properties of poly(amide-imide)s based on the diimide-diacid condensed from 9,9-bis[4-(4-aminophenoxy)phenyl] fluorene and trimellitic anhydride)

RN 159154-88-8 CAPLUS

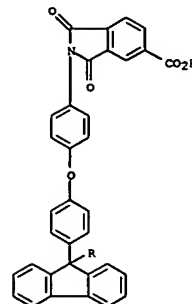
CN 1H-Isindole-5-carboxylic acid, 2,2'-(9H-fluorene-9-ylidenebis(4,1-phenyleneoxy-4,1-phenylene))bis[2,3-dihydro-1,3-dioxo-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

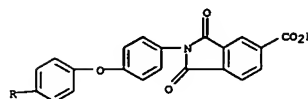
CRN 153404-75-2

CMF C55 H32 N2 O10

PAGE 1-A



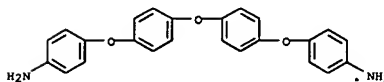
PAGE 2-A



CM 2

CRN 13080-88-1

CMF C24 H20 N2 O3

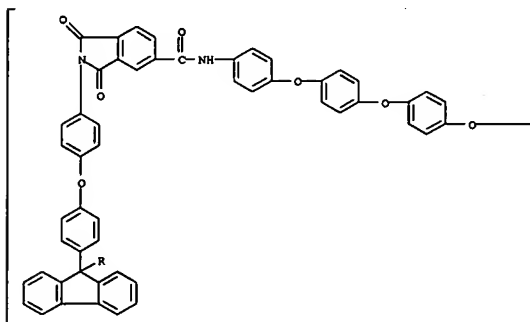


RN 159154-89-9 CAPLUS

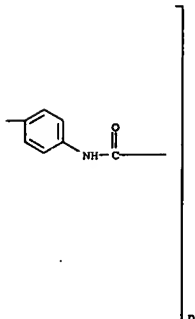
CN Poly[(1,3-dihydro-1,3-dioxo-2H-isindole-5,2-diyl)-1,4-phenyleneoxy-1,4-phenylene-9H-fluorene-9-ylidene-1,4-phenyleneoxy-1,4-phenylene(1,3-dihydro-

1,3-dioxo-2H-isindole-2,5-diyl)carbonylimino-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenyleneiminocarbonyl] (9CI) (CA INDEX NAME)

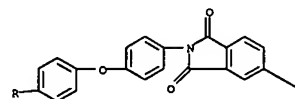
PAGE 1-A



PAGE 1-B



PAGE 2-A



L42 ANSWER 94 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB Heat-resistant, flexible, metal-clad laminates, useful in flexible printed circuits and tape-automated bonding applications, have 21 layer of an aromatic polyimide, e.g., a 4,4'-diaminodiphenyl ether-pyromellitic dianhydride copolymer (I) film, bonded to 21 layer of a metallic substrate using a heat-sealable copolyimide adhesive containing 60-98

mol% imide units derived from oxybis(phthalic anhydride) and bis(aminophenoxy)benzene. Addnl., the metallic substrate may be directly coated with the copolyimide adhesive and used as a single-clad laminate for flexible printed circuits. Thus, a 1 film-Cu foil laminate using a copolyimide (prepared by chemical imidation, glass temperature 202°) of 4,4'-oxybis(phthalic anhydride) 100, 1,3-bis(4-aminophenoxy)benzene 95, and polysiloxanedioxime 5 parts as the adhesive exhibited peel strengths 2.9 and 4.6 lb/linear in. at 300 and 350°, resp.

ACCESSION NUMBER: 1995:9104 CAPLUS  
 DOCUMENT NUMBER: 122:83220  
 TITLE: Heat-sealable copolyimide adhesives and flexible multilayer metal-clad polyimide film laminates  
 INVENTOR(S): Kanakarajan, Kuppusamy; Kreuz, John A.  
 PATENT ASSIGNEE(S): du Pont de Nemours, E. I., and Co., USA  
 SOURCE: U.S., 11 pp. Cont.-in-part of U.S. Ser. No. 571,913, abandoned.  
 CODEN: USXXUM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5298331	A	19940329	US 1992-878483	19920505
JP 04234191	A2	19920821	JP 1991-213495	19910826
JP 2907598	B2	19990621		
US 5411765	A	19950502	US 1993-168866	19931214
			US 1990-571913	B2 19900827
PRIORITY APPLN. INFO.:			US 1992-878483	A3 19920505

IT 158659-09-7  
 RL: USES (Uses)  
 (adhesive, heat-sealable heat-resistant, for bonding polyimide films to copper foils)

RN 158659-09-7 CAPLUS  
 CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 5,5'-oxybis[1,3-isobenzofurandione], 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] and 4,4'-[1,3-phenylenebis(oxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 13080-88-1  
 CMF C24 H20 N2 O3

L42 ANSWER 95 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB The present invention provides a photosensitive composition which comprises a polyimide precursor having a chemical structure selected from several sp. chemical structures and/or sp. amide bond d. and are adjusted so that the film obtained by applying and drying the composition may exhibit a sp. absorbance to light. The polyimide film obtained by heat-curing the above photosensitive composition exhibits excellent phys. properties and water resistance and has high adhesive strength to epoxy resins, inorg. materials, and metals.

ACCESSION NUMBER: 1995:2166 CAPLUS  
 DOCUMENT NUMBER: 122:201242  
 TITLE: Photosensitive composition containing polyimide precursor  
 INVENTOR(S): Matsuoaka, Yoshio; Yokota, Kanichi; Kataoka, Yasuhiro  
 PATENT ASSIGNEE(S): Asahi Kasei Kogyo K.K., Japan  
 SOURCE: Eur. Pat. Appl., 47 pp.  
 CODEN: EPOXUM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 580108	A2	19940126	EP 1993-111557	19930719
EP 580108	A3	19940824		
EP 580108	B1	19970312		
R: DE, FR, GB, IT				
EP 718696	A2	19960626	EP 1996-104167	19930719
EP 718696	A3	19980325		
EP 718696	B1	20020116		
R: DE, FR, GB, IT				
KR 127278	B1	19971226	KR 1993-13919	19930722
US 6162580	A	20001219	US 1995-451616	19950526
US 6482569	B1	20021119	US 2000-572203	20000517
PRIORITY APPLN. INFO.:			JP 1992-215732	A 19920722
			EP 1993-111557	A3 19930719
			US 1993-95783	B1 19930721
			US 1995-451616	A1 19950526

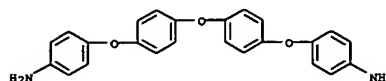
IT 72356-17-3D, reaction products with isocyanateethylmethacrylate  
 RL: USES (Uses)  
 (photosensitive compns. containing, for production of polyimide patterns)

RN 72356-17-3 CAPLUS  
 CN 1,3-Isobenzofurandione, 5,5'-sulfonylbis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

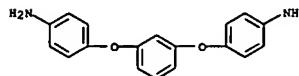
CRN 13080-88-1  
 CMF C24 H20 N2 O3

L42 ANSWER 94 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



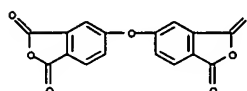
CM 2

CRN 2479-46-1  
 CMF C18 H16 N2 O2



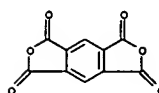
CM 3

CRN 1823-59-2  
 CMF C16 H6 O7

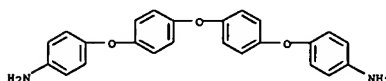


CM 4

CRN 89-32-7  
 CMF C10 H2 O6

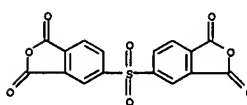


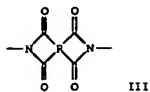
L42 ANSWER 95 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



CM 2

CRN 2540-99-0  
 CMF C16 H6 O8 S





AB The adhesives are composed of polymers having units  
m-C6H4O-p-C6H4O-p-C6H4O-  
m-C6H4Z1 (I) and m-C6H4O-p-C6H4Y-p-C6H4O-m-C6H4Z2 [Z1, Z2 =  
(HNCO)2R(CO2H)2 (II), cyclic imide group III; R = C22 aliphatic,  
alicyclic, monocyclic aromatic, polycondensed aromatic, or directly or  
indirectly bonded noncondensed polycyclic aromatic group; Y = bivalent  
C1-10  
hydrocarbyl, C(CF3)2, CO, S, SO, SO2, O] or I and  
m-C6H4O-p-C6H4O-p-C6H4O-m-  
C6H4Z3 (Z3 = II, III; Z1 = Z3). Thus, 4,4'-bis(3-  
aminophenoxy)biphenyl 0.07, bis[4-(3-aminophenoxy)phenyl] sulfone 0.03,  
pyromellitic dianhydride 0.1 mol were reacted in AcNMe2 to obtain a  
polyamic acid solution, which was cast on a glass plate and heated at  
100-300° for 3 h to give a polyimide film showing tensile shear  
adhesion strength 300 kg/cm2 at room temperature and 175 at 240° when  
pressed on a steel plate at 340°.

ACCESSION NUMBER: 1994:459318 CAPLUS  
DOCUMENT NUMBER: 121:59318  
TITLE: Heat-resistant polyether-polyimide adhesives  
INVENTOR(S): Oota, Masahiro; Kawashima, Saburo; Sonobe, Yoshio;  
Tamai, Masaji; Yamaguchi, Teruhiro  
PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.  
CODEN: JJOQAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06009936	A2	19940118	JP 1993-104369	19930430

PRIORITY APPLN. INFO.: JP 1993-104369 19930430

IT 155912-58-6P  
RL: PREP (Preparation)  
(preparation of, adhesives, heat-resistant)  
RN 155912-58-6 CAPLUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with  
3,3'-[1,1'-biphenyl]-4,4'-diylbis(oxy)]bis(benzenamine) and  
3,3'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)  
CM 1  
CRN 105112-76-3  
CMF C24 H20 N2 O2

AB Imidodicarboxylic acids were prepared from trimellitic anhydride and  
ω-amino acids. Aliphatic-aromatic poly(amide-imide)s were prepared by  
tri-ph phosphite-promoted polycondensation of the imidodicarboxylic acids  
with various aromatic diamines. All of the poly(amide-imide)s were  
characterized by inherent viscosity, GPC, solubility, tensile strength,  
wide-angle x-ray scattering, DSC, and TGA. The effects of structural  
changes such as polymethylene length and diamine moieties on the  
properties of poly(amide-imide)s were studied.

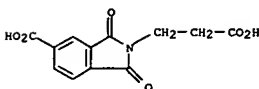
ACCESSION NUMBER: 1994:410124 CAPLUS  
DOCUMENT NUMBER: 121:10124  
TITLE: Synthesis and properties of poly(amide-imide)s  
derived

from trimellitic anhydride, ω-amino acids, and  
aromatic diamines  
AUTHOR(S): Hsiao, Sheng-Huei; Yang, Chin-Ping; Wu, Feng-Yueh  
CORPORATE SOURCE: Dep. Chem. Eng., Tatung Inst. Technol., Taipei,  
Taiwan  
SOURCE: Journal of Polymer Science, Part A: Polymer  
Chemistry

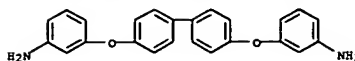
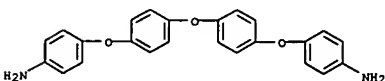
(1994), 32(8), 1481-96  
CODEN: JPACCE; ISSN: 0887-624X  
DOCUMENT TYPE: Journal  
LANGUAGE: English

IT 155759-50-5P 155759-61-8P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(preparation and properties of)  
RN 155759-50-5 CAPLUS  
CN 2H-Isoidole-2-propanoic acid, 5-carboxy-1,3-dihydro-1,3-dioxo-, polymer  
with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX  
NAME)

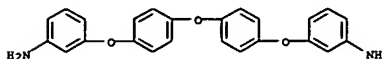
CM 1  
CRN 61052-98-0  
CMF C12 H9 N O6



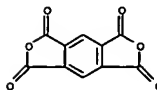
CM 2  
CRN 13080-88-1  
CMF C24 H20 N2 O3



CM 2  
CRN 58883-55-9  
CMF C24 H20 N2 O3

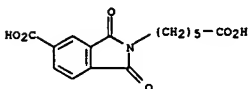


CM 3  
CRN 89-32-7  
CMF C10 H2 O6

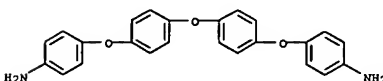


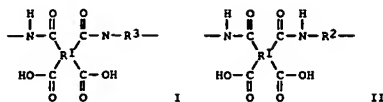
RN 155759-61-8 CAPLUS  
CN 2H-Isoidole-2-hexanoic acid, 5-carboxy-1,3-dihydro-1,3-dioxo-, polymer  
with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX  
NAME)

CM 1  
CRN 29378-16-3  
CMF C15 H15 N O6



CM 2  
CRN 13080-88-1  
CMF C24 H20 N2 O3





AB The title polyimide film, for elec. circuits and semiconductors, is prepared by thermal dehydration of polyimide precursors I and II (R1 = aromatic tetraivalent group; R2 = aromatic divalent group; R3 = divalent nonlinear-structure organic group containing  $\geq 2$  arom rings). The title polyimide film has excellent low dielec. coefficient, low thermal expansion

coefficient, heat resistance, and adhesion.

ACCESSION NUMBER: 1994:337098 CAPLUS

DOCUMENT NUMBER: 120:337098

TITLE: Surface-protection polyimide films for electric circuits providing electric, heat, and  $\alpha$ -ray insulation

INVENTOR(S): Togawa, Hideo; Shoji, Fusaji; Kataoka, Fumio

PATENT ASSIGNEE(S): Hitachi Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 29 pp.

CODEN: JTOGAF

Patent Japanese

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05275417	A2	19931022	JP 1993-11115	19930126
PRIORITY APPLN. INFO.:			JP 1992-16670	A1 19920131

IT 151233-78-2P 151233-80-6P 151233-81-7P

154955-81-4P 154955-82-5P

RL: PREP (Preparation)

(preparation of, for surface-protecting film for elec. circuit)

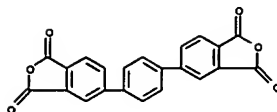
RN 151233-78-2 CAPLUS

CN 1,3-Isobenzofurandione, 5,5'-(1,4-phenylene)bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] and [1,1':4',1''-terphenyl]-4,4''-diamine (9CI) (CA INDEX NAME)

CM 1

CRN 106070-55-7

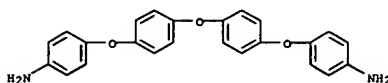
CMF C22 H10 O6



CM 2

CRN 13080-88-1

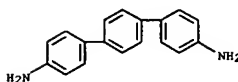
CMF C24 H20 N2 O3



CM 3

CRN 3365-85-3

CMF C18 H16 N2



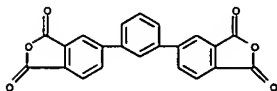
RN 151233-80-6 CAPLUS

CN 1,3-Isobenzofurandione, 5,5'-(1,3-phenylene)bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] and [1,1':4',1''-terphenyl]-4,4''-diamine (9CI) (CA INDEX NAME)

CM 1

CRN 113837-02-8

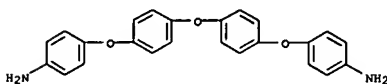
CMF C22 H10 O6



CM 2

CRN 13080-88-1

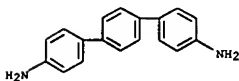
CMF C24 H20 N2 O3



CM 3

CRN 3365-85-3

CMF C18 H16 N2



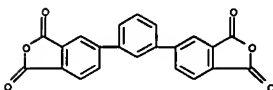
RN 151233-81-7 CAPLUS

CN 1,3-Isobenzofurandione, 5,5'-(1,3-phenylene)bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] and [1,1':4',1''-terphenyl]-4,4''-diamine (9CI) (CA INDEX NAME)

CM 1

CRN 113837-02-8

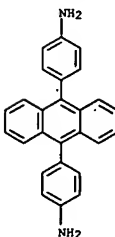
CMF C22 H10 O6



CM 2

CRN 106704-35-2

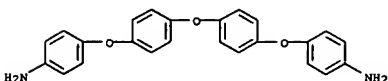
CMF C26 H20 N2



CM 3

CRN 13080-88-1

CMF C24 H20 N2 O3



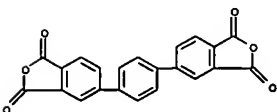
RN 154955-81-4 CAPLUS

CN 1,3-Isobenzofurandione, 5,5'-(1,4-phenylene)bis-, polymer with 3-(diethoxymethylsilyl)-1-propanamine, 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] and [1,1':4',1''-terphenyl]-4,4''-diamine (9CI) (CA INDEX NAME)

CM 1

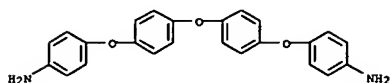
CRN 106070-55-7

CMF C22 H10 O6

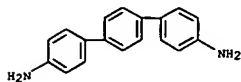


CM 2

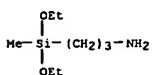
CRN 13080-88-1  
CMF C24 H20 N2 O3



CH 3  
CRN 3365-85-3  
CMF C18 H16 N2

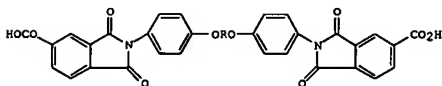


CH 4  
CRN 3179-76-8  
CMF C8 H21 N O2 Si



RN 154955-82-5 CAPLUS  
CN {5,5'-Bisobenzofuran}-1,1',3,3'-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine], 5,5'-(1,4-phenylene)bis[1,3-isobenzofurandione] and [1,1':4',1''-terphenyl]-4,4''-diamine (9CI) (CA INDEX NAME)

CH 1  
CRN 106070-55-7  
CMF C22 H10 O6



AB Title acids I (R = arylene), useful for manufacture of polyamide-polyether-polyimides with improved strength, heat resistance and processability, are prepared by condensing the appropriate aromatic diamines with trimellitic anhydride (II) in a polar solvent. Thus, reaction of 1,4-bis(4-aminophenoxy)benzene with II in DMF gave I (R = 1,4-phenylene), which was polymerized with 2,2-bis[4-(4-aminophenoxy)phenyl] sulfone to give a polymer with tensile strength 62 MPa and 10% weight loss temperature 525 and 521° in air and N, resp.

ACCESSION NUMBER: 1994:324460 CAPLUS  
DOCUMENT NUMBER: 120:324460  
TITLE: Diimide dicarboxylic acids and their polyamides  
INVENTOR(S): Yang, Chin Ping; Hsiao, Sheng Huei; Lin, Jiun Hung  
PATENT ASSIGNEE(S): National Science Council, Taiwan  
SOURCE: U.S., 11 pp.  
CODEN: USXXUM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

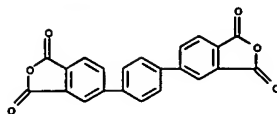
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5268487	A	19931207	US 1993-44237	19930407
US 5414070	A	19950509	US 1993-162683	19931203
PRIORITY APPLN. INFO.:			US 1993-44237	A3 19930407

OTHER SOURCE(S): MARPAT 120:324460

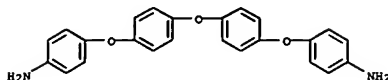
IT 153404-86-5P  
RL: IMP (Industrial manufacture): PREP (Preparation)  
(manufacture of heat-resistant)

RN 153404-86-5 CAPLUS  
CN 1H-Indole-5-carboxylic acid, 2,2'-[1,4-phenylene]bis[2,3-dihydro-1,3-dioxo-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

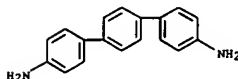
CH 1  
CRN 153404-71-8  
CMF C37 H22 N2 O10



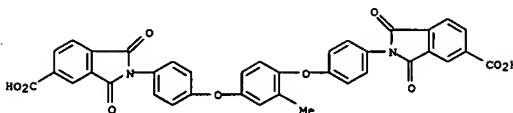
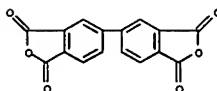
CH 2  
CRN 13080-88-1  
CMF C24 H20 N2 O3



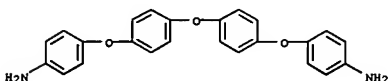
CH 3  
CRN 3365-85-3  
CMF C18 H16 N2



CH 4  
CRN 2420-87-3  
CMF C16 H6 O6



CH 2  
CRN 13080-88-1  
CMF C24 H20 N2 O3

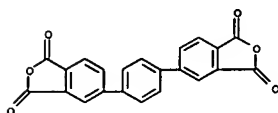


L42 ANSWER 100 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB Aromatic diamines are used with m- and/or p-terphenyl-3,3'',4,4''-tetracarboxylic acid dianhydride (I) in the preparation of polyimides which show good heat resistance, low thermal expansion, high glass temperature, and good mech. properties and are useful in the manufacture of multilayer elec. circuits. Stirring I with 3,3'-dimethyl-4,4'-diaminobiphenyl in 1:1 AcNMe<sub>2</sub>-methylpyrrolidone and heating at 60-70° gave a polyamic acid solution which was applied on a Si wafer and heated to give a polyimide film having glass temperature 400°, 3% weight loss temperature 540°, dielec. constant (25°, 10 kHz) 2.8, and Young's modulus 700 kg/mm<sup>2</sup>.  
 ACCESSION NUMBER: 1994:220501 CAPIUS  
 DOCUMENT NUMBER: 120:220501  
 TITLE: Preparation of precursors for manufacture of polyimides  
 INVENTOR(S): Togawa, Hideo; Shoji, Fusaji; Kataoka, Fumio; Sato, Nintei  
 PATENT ASSIGNEE(S): Hitachi Ltd, Japan; Hitachi Chemical Co Ltd  
 SOURCE: Jpn. Kokai Tokkyo Koho, 33 pp.  
 CODEN: JIOGAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

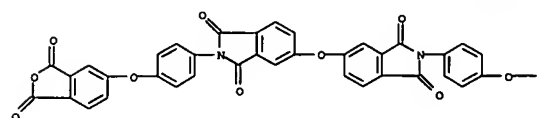
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05214100	A2	19930824	JP 1992-16729	19920131

PRIORITY APPLN. INFO.: JP 1992-16729 19920131

IT 154254-73-6P  
 RL: PREP (Preparation)  
 (preparation of heat-resistant, with low dielec. constant and high glass temperature)  
 RN 154254-73-6 CAPIUS  
 CN 1,3-Isobenzofurandione, 5,5'-(1,4-phenylene)bis-, polymer with 3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine and 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)  
 CH 1  
 CRN 106070-55-7  
 CMF C22 H10 O6

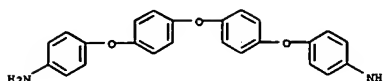


L42 ANSWER 101 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB Isomeric aminophenoxy and aminobenzoyl phthalic acids were used to prepare diimiddianhydrides. The polycondensation of the diimiddianhydrides with various diamines in AcNMe<sub>2</sub> is used to obtain copolyimides containing imide units which are sym. and asym. arranged with respect to the kink atoms in the elementary units. The copolyimide films exhibit high thermal stability and good mech. properties. Soluble thermoplastic copolyimides can be obtained by using meta-isomeric aminoaryl phthalic acids.  
 ACCESSION NUMBER: 1994:218697 CAPIUS  
 DOCUMENT NUMBER: 120:218697  
 TITLE: Synthesis of polyimides and copolyimides based on (aminoaryl)phthalic acids  
 AUTHOR(S): Nosova, G. I.; Koton, M. M.; Laius, L. A.  
 CORPORATE SOURCE: Inst. Macromol. Compd., St.-Petersburg, 199004, Russia  
 SOURCE: Adv. Polyimide Sci. Technol., Proc. Int. Conf. Polyimides, 4th (1993), Meeting Date 1991, 66-75.  
 Editor(s): Feger, Claudius; Khojasteh, Mahmoud M.; Htoo, Maung S. Technomic: Lancaster, Pa.  
 CODEN: 59CAA2  
 DOCUMENT TYPE: Conference  
 LANGUAGE: English  
 IT 153728-61-1P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation and characterization of)  
 RN 153728-61-1 CAPIUS  
 CN 1H-Isoidole-1,3(2H)-dione, 5,5'-oxybis[2-[(1,3-dihydro-1,3-dioxo-5-isobenzofuranyl)oxy]phenyl]-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)  
 CH 1  
 CRN 129669-67-6  
 CMF C44 H20 N2 O13

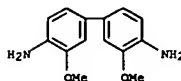


PAGE 1-A

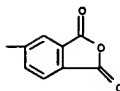
L42 ANSWER 100 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)  
 CH 2  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3



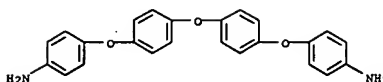
CH 3  
 CRN 119-90-4  
 CMF C14 H16 N2 O2



L42 ANSWER 101 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)  
 PAGE 1-B



CH 2  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3



L42 ANSWER 102 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB The title material comprises a leuco dye, an isocyanate compound and a specified amino compound selected from a substituted Ph or biphenyl compound

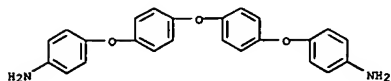
The material has excellent storage stability and color image stability.

ACCESSION NUMBER: 1994:204711 CAPLUS  
 DOCUMENT NUMBER: 120:204711  
 TITLE: Thermal recording material  
 INVENTOR(S): Kawakami, Hiroshi; Nozaki, Chiyoshi; Iwakura, Ken  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Eur. Pat. Appl., 10 pp.  
 CODEN: EPOQDW

DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 562824	A2	19930929	EP 1993-302204	19930323
EP 562824	A3	19940727		
EP 562824	B1	19970611		
R: DE, ES, FR, GB				
ES 2105104	T3	19971016	ES 1993-302204	19930323
PRIORITY APPLN. INFO.:			JP 1992-66212	A 19920324

OTHER SOURCE(S): MARPAT 120:204711  
 IT 13080-88-1, Bis[4-(4-aminophenoxy)phenyl]ether  
 RL: USES (Uses)  
 (thermal printing material containing, for improved stability)  
 RN 13080-88-1 CAPLUS  
 CN Benzenamine, 4,4'-[oxybis(4,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)



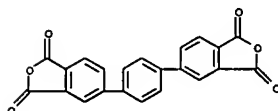
L42 ANSWER 103 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB The title precursors, useful for manufacture of polyimides with good heat resistance and low dielec. constant, are prepared by polycondensation of terphenyltetracarboxylic acid dianhydrides with aromatic diamines. Thus, heating bis[4-(4-aminophenoxy)phenyl] ether 0.0074, p-diaminoterphenyl 0.0074, and p-terphenyl-3,3',4,4'-tetracarboxylic acid dianhydride 0.0148 mol in 1:1 Ac2O:Me2N-methylpyrrolidone mixture at 60-70° for 5 h gave a varnish having viscosity 50 P, which was applied on a Si wafer, and heated 30 min at 200° and 350°, resp., to give a film having Young's modulus 420 kg/mm2, glass temperature 400°, 31-weight loss temperature 550°, and dielec. constant (10 kHz, 25°) 2.7.

ACCESSION NUMBER: 1994:135440 CAPLUS  
 DOCUMENT NUMBER: 120:135440  
 TITLE: Preparation of polyimide precursors and polyimides manufactured therefrom  
 INVENTOR(S): Togawa, Hideo; Shoji, Fusaji; Kataoka, Fumio; Sato, Tonobu  
 PATENT ASSIGNEE(S): Hitachi Ltd, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.  
 CODEN: JIQQAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05132554	A2	19930528	JP 1990-279072	19901019
US 5272247	A	19931221	US 1991-779986	19911021
PRIORITY APPLN. INFO.:			JP 1990-279072	19901019
			JP 1991-225634	19910905

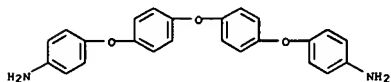
IT 151233-78-2P 151564-43-1P  
 RL: PREP (Preparation)  
 (preparation of, films, with low dielec. constant, heat-resistant)  
 RN 151233-78-2 CAPLUS  
 CN 1,3-Isobenzofurandione, 5,5'-(1,4-phenylene)bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] and [1,1':4',1''-terphenyl]-4,4''-diamine (9CI) (CA INDEX NAME)

CM 1  
 CRN 106070-55-7  
 CMF C22 H10 O6

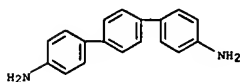


CM 2

L42 ANSWER 103 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3

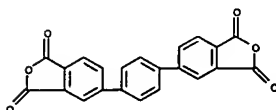


CM 3  
 CRN 3365-85-3  
 CMF C18 H16 N2



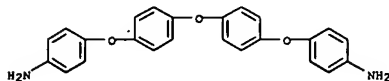
RN 151564-43-1 CAPLUS  
 CN 1,3-Isobenzofurandione, 5,5'-(1,4-phenylene)bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1  
 CRN 106070-55-7  
 CMF C22 H10 O6



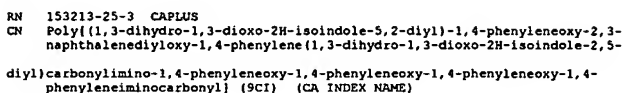
CM 2  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3

L42 ANSWER 103 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)





DOCUMENT TYPE: JOURNAL  
 LANGUAGE: English  
 IT 153213-24-2P 153213-25-3P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 153213-24-2 CAPLUS  
 RN 1H-[Indole-5-(2-carboxylic acid, 2',-[2,3-naphthalenediylbis(oxy-4,1-  
 CN phenylene)]bis[2,3-dihydro-1,3-dioxo-, polymer with 4,4'-[oxybis(4,1-  
 phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)  
 CM 1  
 CMR 153213-07-1  
 CWF C40\_H22\_N2\_O10

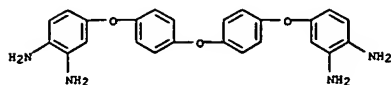


The chemical structure shows a repeating unit of a poly(amide ether) polymer. The backbone consists of a biphenyl ether linkage connected to a phthalimide group, which is further linked to an amide group. The amide group is connected to a phenyl ring, which is then linked to another biphenyl ether linkage. The structure is shown as a repeating unit with a subscript 'n'.

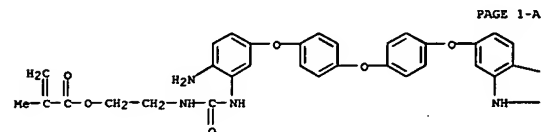
COc1ccc(NC(=O)C)cc1

OTHER SOURCE(S): MARPAT 120:90864  
IT 51532-46-8 151668-85-8

L42 ANSWER 105 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)  
 RL: USES (Uses)  
 (photosensitive resins prepd. from)  
 RN 51532-46-8 CAPIUS  
 CN 1,2-Benzenediamine, 4,4'-[oxybis(4,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)

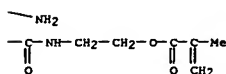


RN 151668-85-8 CAPIUS  
 CN 2-Propenoic acid, 2-methyl-, oxybis[4,1-phenyleneoxy(6-amino-3,1-phenylene)iminocarbonylimino-2,1-ethanediyl] ester (9CI) (CA INDEX NAME)

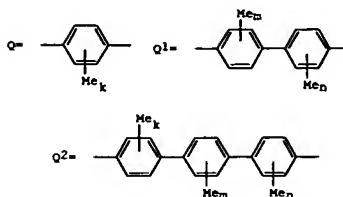


PAGE 1-A

PAGE 1-B



L42 ANSWER 106 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN GI



AB Polyamic acids containing repeating units  $\text{NHCOR1(CO2H)2CONHR2}$  ( $\text{R1} = \text{organic}$  group;  $\text{R2} = \text{Q, Q1, Q2}$ ;  $k, m, n = 0-4$ ;  $2l$  of  $k, m, n$  is not 0), polyimides prepared by thermal dehydration of the polyamic acids, and circuit structures using the polyimides in interlayer insulating films are claimed. Thus, treating 13.0 g 3,3'-dimethyl-4,4'-diaminobiphenyl with 18.02 g biphenyl-3,3',4,4'-tetracarboxylic dianhydride in  $\text{N,N}$ -dimethyl-2-pyrrolidone mixture at 55-65° gave a polyamic acid varnish, which was applied on a glass wafer and heated at 200° for 30 min and at 350° for 30 min to give a polyimide film showing sp. dielec. constant 2.8, glass transition temperature >400°, and thermal expansion coefficient 7 ppm/°C. A multilayered printed circuit board was manufactured using the polyimide as the interlayer insulating film, in which the insulating layer was ashed under O at 0.5 torr. No cracks nor interlayer peeling was observed.

ACCESSION NUMBER: 1994:56370 CAPIUS  
 DOCUMENT NUMBER: 120:56370  
 TITLE: Polyimides for interlayer insulation films, their precursors, and circuit structures  
 INVENTOR(S): Togawa, Hideo; Shoji, Fusaji; Kataoka, Fumio  
 PATENT ASSIGNEE(S): Hitachi Ltd, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.  
 CODEN: JKOCAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05230213	A2	19930907	JP 1992-33150	19920220
JP 3075740	B2	20000821		
US 5536584	A	19960716	US 1993-11493	19930129
			JP 1992-16670	A 19920131

PRIORITY APPLN. INFO.:

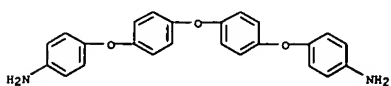
L42 ANSWER 106 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)  
 JP 1992-33150 A 19920220

IT 152219-81-3P 152219-85-7P  
 RL: PREP (Preparation)  
 (preparation of, as interlayer insulating films for multilayered printed circuit boards)

RN 152219-81-3 CAPIUS  
 CN [5,5'-Bisobenzofuran]-1,1',3,3'-tetrone, polymer with 3,3'-dimethyl[1,1'-biphenyl]-4,4'-diamine and 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

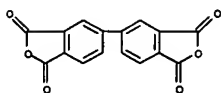
CM 1

CRN 13080-88-1  
 CMF C24 H20 N2 O3



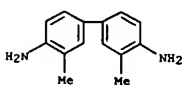
CM 2

CRN 2420-87-3  
 CMF C16 H6 O6



CM 3

CRN 119-93-7  
 CMF C14 H16 N2

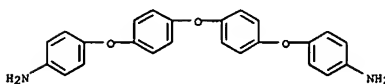


RN 152219-85-7 CAPIUS  
 CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 3,3'-dimethyl[1,1'-biphenyl]-4,4'-diamine and 4,4'-[oxybis(4,1-

L42 ANSWER 106 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)  
 phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

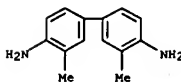
CM 1

CRN 13080-88-1  
 CMF C24 H20 N2 O3



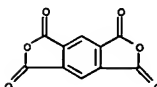
CM 2

CRN 119-93-7  
 CMF C14 H16 N2



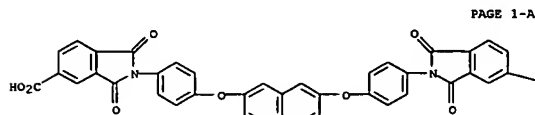
CM 3

CRN 89-32-7  
 CMF C10 H2 O6

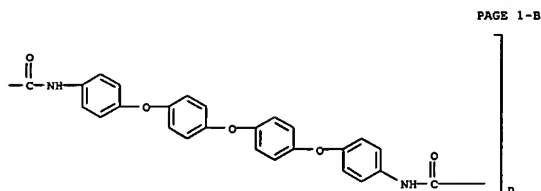


L42 ANSWER 107 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB An imide ring-containing dicarboxylic acid, 2,7-bis[4-(N-trimellitoyl)phenoxy]naphthalene (I), was prepared by condensation of 2,7-bis(4-aminophenoxy)naphthalene and trimellitic anhydride. A series of new aromatic poly(amide-imides) containing bis(phenoxy)naphthalene moieties having inherent viscosities of 0.8-1.57 dL/g were prepared by direct polycondensation of I with various aromatic diamines using tri-Ph phosphite and pyridine as condensing agents in 1-methyl-2-pyrrolidone (II) in the presence of CaCl<sub>2</sub>. The polymers show excellent solubility in polar solvents such as II and most of them could be cast into transparent and tough films. Measurements of wide-angle X-ray diffraction revealed that those polymer containing p-phenylene or oxyphenylene groups are partially crystalline. Amorphous members exhibit glass transition temps. at 250-311°. Thermal analyses indicated that these polymers are fairly stable, and the 101 weight loss temps. were recorded at 526-575° in nitrogen and 481-556° in air.

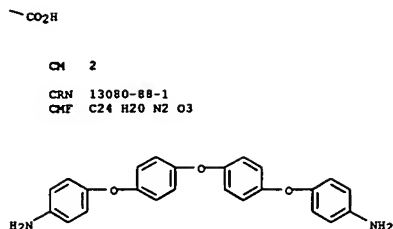
ACCESSION NUMBER: 1993:671870 CAPIUS  
 DOCUMENT NUMBER: 119:271870  
 TITLE: New poly(amide imides) syntheses. 6. Preparation and properties of poly(amide imides) derived from 2,7-bis(4-aminophenoxy)naphthalene, trimellitic anhydride and various aromatic diamines  
 AUTHOR(S): Yang, Chin Ping; Chen, Wen Tung  
 CORPORATE SOURCE: Dep. Chem. Eng., Tatung Inst. Technol., Taipei, Taiwan  
 SOURCE: Makromolekulare Chemie (1993), 194(11), 3071-80  
 CODEN: MACEAK; ISSN: 0025-116X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 151603-05-3P 151627-04-2P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation and properties of)  
 RN 151603-05-3 CAPIUS  
 CN 1H-Isindole-5-carboxylic acid, 2,2'-(2,7-naphthalenediyl)bis(oxy-4,1-phenylene)bis[2,3-dihydro-1,3-dioxo-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)  
 CH 1  
 CRN 151455-62-8  
 CMF C40 H22 N2 O10



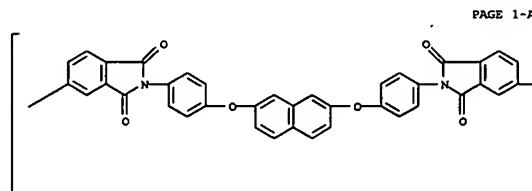
L42 ANSWER 107 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)



L42 ANSWER 107 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)  
 PAGE 1-B



RN 151627-04-2 CAPIUS  
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isindole-5,2-diyl)-1,4-phenyleneoxy-2,7-naphthalenediyl]oxy-1,4-phenylene[1,3-dihydro-1,3-dioxo-2H-isindole-2,5-diyl]carbonylimino-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenyleneiminocarbonyl (9CI) (CA INDEX NAME)



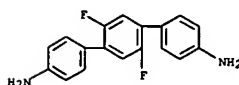
L42 ANSWER 108 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB The title precursors providing polyimides with low dielec. constant, low thermal expansion and high heat resistance, suitable for multilayer circuit boards have repeating units -NHCOR1(CO2H)2CONHR2- and -NHCOR1(CO2H)2CONHR3- (R1 = tetravalent terphenyl residue; R2 = F-containing terphenyl or quaterphenyl residue; R3 = divalent organic group containing 22 aromatic rings in bent form). A solution from bis[4-(4-aminophenoxy)phenyl] ether 2.8411, 4,4'-diamino-2',5'-difluoro-p-terphenyl 2.1899, and 1:1 N-methyl-2-pyrrolidone-AcOEt 47.9 g was stirred with 5.4734 g 3,3'',4,4''-p-terphenyltetracarboxylic dianhydride and heated at 60-70° for 5 h to obtain a polyamic acid varnish which was then spin-coated on a Si wafer and heated under N at 200° for 30 min then at 350° for 30 min to give a polyimide film with dielec. constant (10 kHz, 25°) 2.6, decomposition temperature 540°, Tg 380°, thermal expansion coefficient 23 ppm/°C, tensile strength 15 kg/mm<sup>2</sup>, Young's modulus 380 kg/mm<sup>2</sup>, and elongation 15%.

ACCESSION NUMBER: 1993:650772 CAPIUS  
 DOCUMENT NUMBER: 119:250772  
 TITLE: Polyimide precursors and cured polyimides and manufacture thereof  
 INVENTOR(S): Shoji, Fusaji; Togawa, Hideo; Kataoka, Fumio; Sato, Nintei  
 PATENT ASSIGNEE(S): Hitachi Ltd, Japan; Hitachi Chemical Co Ltd  
 SOURCE: Jpn. Kokai Tokkyo Koho, 25 pp.  
 CODEN: JKOXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

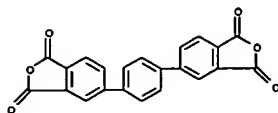
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05112644	A2	19930507	JP 1991-274082	19911022
PRIORITY APPL. INFO.: JP 1991-274082 19911022				

IT 151205-08-2P 151205-13-9DP,  
 aminopropyl-diethoxymethylsilane-terminated 151969-14-1P  
 RL: IMF (Industrial manufacture); PREP (Preparation) (manufacture of, heat-resistant, for multilayer circuit boards)  
 RN 151205-08-2 CAPIUS  
 CN 1,3-isobenzofurandione, 5,5'-(1,4-phenylene)bis-, polymer with 2',5'-difluoro[1,1':4',1''-terphenyl]-4,4''-diamine and 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

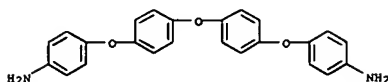
CH 1  
 CRN 151205-07-1  
 CMF C18 H14 F2 N2



CRN 106070-55-7  
CMF C22 H10 O6

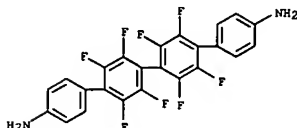


CRN 13080-88-1  
CMF C24 H20 N2 O3



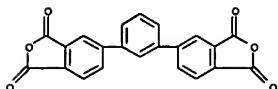
RN 151205-13-9 CAPLUS  
 CN 1,3-isobenzofurandione, 5,5'-(1,4-phenylene)bis-, polymer with  
 2',2'',3',3'',5',5'',6',6''-octafluoro[1,1',4',1''':4,4',1''':4,4''-quaterphenyl]-  
 4,4''-diamine and 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9C1)  
 (CA INDEX NAME)

CRN 151205-12-8  
CMF C24 H12 F8 N2

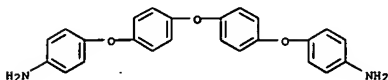


CM 2

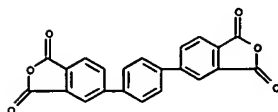
L42 ANSWER 108 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



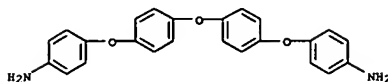
CRN 13080-88-1  
CMF C24 H20 N2 O3



CRN 106070-55-7  
CMT C22 H10 06

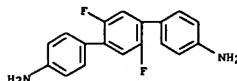


CRN 13080-88-1  
CMF C24 H20 N2 O3



RN 151969-14-1 CAPLUS  
 CN 1,3-isobenzofurandione, 5,5'-([1,3-phenylene]bis-, polymer with  
 2',5'-difluoro[1,1':4,1''-terphenyl]-4,4''-diamine and  
 4,4'-oxybis(4,1:4'phenyleneoxy)bis[benzamine] (9CI) (CA INDEX NAME)

CRN 151205-07-1  
CHF C18 H14 F2 N2



CRN 113837-02-8  
CMF C22 H10 O6

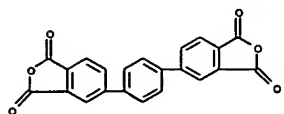
142 ANSWER 109 OF 231 CAPLUS COPYRIGHT 2005 ACS ON STN  
AB The title precursors providing polyimides with low dielec. constant, low thermal expansion and high heat resistance, suitable for multilayer circuit boards, have repeating units NHCOR1(CO2H)2CONHR2 and NHCOR1(CO2H)2CONHR3 (R1 = tetravalent terphenyl residue; R2 = terphenyl or quaterphenyl residue, anthracenediphenylene; R3 = divalent organic group containing 22 aromatic rings in bent form). A solution from bis[4-(4-aminophenyl)phenyl] ether 2.842, 4,4'-diamino-p-terphenyl 1.924, and 1:1 N-methyl-2-pyrrolidone-AcNme2 53.2 g was stirred with 5.475 g 3,3',4,4'-terphenyltetracarboxylic dianhydride and heated at 60-70° for 5 h to obtain a polyamic acid varnish which was thinned with N-methyl-2-pyrrolidone to viscosity 56 P and n spin coated on a Si wafer and heated under N at 200° for 30 min and at 350° for 30 min to give a polyimide film with dielec. constant (10 kHz, 25°) 2.7, decomposition temperature 390°, Tg 390°, thermal expansion coefficient 21 ppm/°C, tensile strength 16 kg/mm2, Young's modulus 420 kg/mm2, and elongation 17%.

ACCESSION NUMBER: 1993:650771 CAPLUS  
DOCUMENT NUMBER: 119:250771  
TITLE: Polyimide precursors and cured polyimides and manufacture thereof  
INVENTOR(S): Togawa, Hideo; Shoji, Fusa; Kataoka, Fumio; Sato, Nintei  
PATENT ASSIGNEE(S): Hitachi Ltd, Japan; Hitachi Chemical Co Ltd  
SOURCE: Jpn. Kokai Tokkyo Koho, 27 pp.  
CODEN: JKXXAP  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

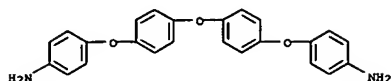
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05112642	A2	19930507	JP 1991-150565	19910621
PRIORITY APPLN. INFO.:			JP 1991-150565	19910621

IT	151233-76-2ZD, aminopropylmethoxymethylsilane-terminated
151233-76-2ZD	151233-81-7P
RL	IMF (Industrial manufacture); PREP (Preparation)
	(Manufacture of, heat-resistant, precursors for)
RN	151233-78-2 CAPLUS
CR	1,3-Isobenzofurandione, 5,5'-(1,4-phenylene)bis-, polymer with
	4,4'-(oxybis(4,1-phenyleneoxy)) [bis[benzenamide] and [1,1':4',1''-terphenyl]-4,4''-diamine (9CI) (CA INDEX NAME)]

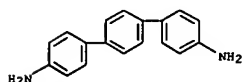
CRN 106070-55-7  
CMF C22 H10 O6



CH 2  
CRN 13080-88-1  
CMF C24 H20 N2 O3

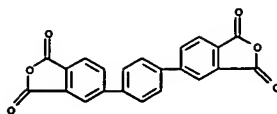


CH 3  
CRN 3365-85-3  
CMF C18 H16 N2

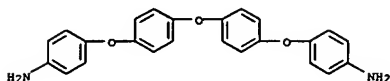


RN 151233-78-2 CAPIUS  
CN 1,3-Isobenzofurandione, 5,5'-(1,4-phenylene)bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] and [1,1':4',1''-terphenyl]-4,4''-diamine (9CI) (CA INDEX NAME)

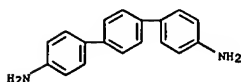
CH 1  
CRN 106070-55-7  
CMF C22 H10 O6



CH 2  
CRN 13080-88-1  
CMF C24 H20 N2 O3

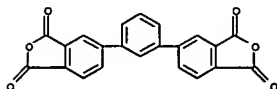


CH 3  
CRN 3365-85-3  
CMF C18 H16 N2

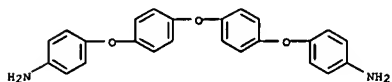


RN 151233-80-6 CAPIUS  
CN 1,3-Isobenzofurandione, 5,5'-(1,3-phenylene)bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] and [1,1':4',1''-terphenyl]-4,4''-diamine (9CI) (CA INDEX NAME)

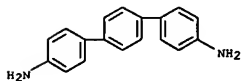
CH 1  
CRN 113837-02-8  
CMF C22 H10 O6



CH 2  
CRN 13080-88-1  
CMF C24 H20 N2 O3

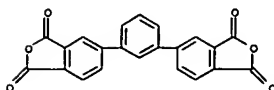


CH 3  
CRN 3365-85-3  
CMF C18 H16 N2

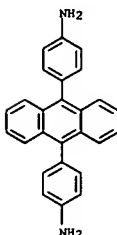


RN 151233-81-7 CAPIUS  
CN 1,3-Isobenzofurandione, 5,5'-(1,3-phenylene)bis-, polymer with 4,4'-[9,10-anthracenediyl]bis[benzenamine] and 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

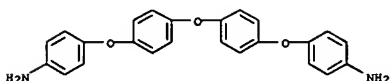
CH 1  
CRN 113837-02-8  
CMF C22 H10 O6



CH 2  
CRN 106704-35-2  
CMF C26 H20 N2



CH 3  
CRN 13080-88-1  
CMF C24 H20 N2 O3



L42 ANSWER 110 OF 231 CAPLUS COPYRIGHT 2005 ACS ON STN

AB The title blends with good mech. strength and film-forming properties comprise 10-70% aromatic polysulfones and 30-90% aromatic poly(amide imides) and are prepared by reacting aromatic diamines with aromatic tricarboxylic acids in the presence of aromatic polysulfones while exposing to ultrasonic wave. Stirring 20.1 g Poly(oxy-1,4-phenylenesulfonyl-1,4-phenylene) and 52.0 g 4,4'-diaminodiphenyl ether in AcNMe2 at 0° while exposing to a 40 kHz ultrasonic wave, stirring with 54.9 g trimellitic anhydride chloride for 4 h, casting on a glass plate, and heating 15 h at 150° gave a film with elongation 15%, tensile strength 1280 kg/cm2, and initial modulus 175,000 kg/cm2, vs. 9, 780, and 116,000, resp., without the irradiation

ACCESSION NUMBER: 1993:450584 CAPLUS  
DOCUMENT NUMBER: 119:50584  
TITLE: Aromatic polysulfone and aromatic polyamide imide blends with good heat, chemical, and scorch resistance  
INVENTOR(S): Tanaka, Juji; Watanabe, Iku; Iwafune, Kyotoshi  
PATENT ASSIGNEE(S): Zaidan Hojin Sekiyu Sangyo Kasseika Center, Japan; Cosmo Oil Co., Ltd.  
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKOXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04335064	A2	19921124	JP 1991-133471	19910509
PRIORITY APPLN. INFO.:			JP 1991-133471	19910509

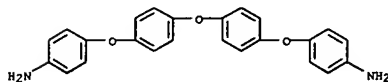
IT 148855-50-9

RL: USES (Uses)  
(aromatic polysulfone blends, with good film-forming and mech. properties)

RN 148855-50-9 CAPLUS  
CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 13080-88-1  
CMF C24 H20 N2 O3



CM 2

CRN 552-30-7

L42 ANSWER 111 OF 231 CAPLUS COPYRIGHT 2005 ACS ON STN

AB Thermal recording materials containing electron-donating color formers, electron-accepting compds., and 2,1-R1OC6H4XC6H4OR2-4 (R1-2 = aryl; X = O, S) are claimed. The thermal recording materials show high sensitivity and provide heat and humidity- and plasticizer-resistant images.

ACCESSION NUMBER: 1993:437572 CAPLUS  
DOCUMENT NUMBER: 119:37572  
TITLE: Thermal recording materials containing bis(4-aryloxyphenyl) ethers or sulfides for storage-stable images  
INVENTOR(S): Nakatsuka, Masakatsu; Ootsuji, Atsuo; Tanabe, Yoshimitsu; Yamaguchi, Teruhiro  
PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.  
CODEN: JKOXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

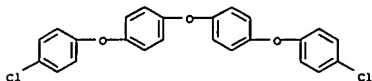
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05058036	A2	19930309	JP 1991-219457	19910830
PRIORITY APPLN. INFO.:			JP 1991-219457	19910830

OTHER SOURCE(S): MARPAT 119:37572

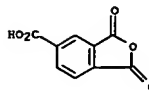
IT 148588-76-5

RL: TEM (Technical or engineered material use); USES (Uses)  
(thermal recording materials containing, heat and humidity- and plasticizer-resistant images from)

RN 148588-76-5 CAPLUS  
CN Benzene, 1,1'-oxybis[4-(4-chlorophenoxy)]- (9CI) (CA INDEX NAME)



L42 ANSWER 110 OF 231 CAPLUS COPYRIGHT 2005 ACS ON STN (Continued)  
CMF C9 H4 O5



L42 ANSWER 112 OF 231 CAPLUS COPYRIGHT 2005 ACS ON STN

AB Thermally stable polyimides with good film-forming properties were prepared from 3,3',4,4'-benzophenonetetracarboxylic dianhydride, 1-(tetrafluoroethoxy)-2,4-phenylenediamine, and F-containing aromatic diamines. Introducing an O hinge atom or an octafluorobiphenylene group in the diamine led to increased temperature for initial thermal degradation in air.

Increasing the concentration of oxyphenylene fragments or introducing an octafluorobiphenylene fragment decreased the temperature of initial deformation to 260-300°.

ACCESSION NUMBER: 1993:255435 CAPLUS  
DOCUMENT NUMBER: 118:255435  
TITLE: New fluorine-containing mixed polyimides  
AUTHOR(S): Shel'udko, E. V.; Golod, L. P.; Slutsky, V. I.  
CORPORATE SOURCE: Inst. Biorg. Khim. Neftekhim., Kiev, Ukraine  
SOURCE: Doklady Akademii Nauk Ukrainy (1991), (11), 131-4  
CODEN: DANUES; ISSN: 1024-767X  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian

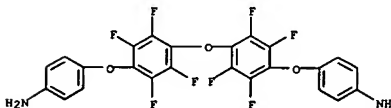
IT 148058-01-9P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(preparation and properties of)

RN 148058-01-9 CAPLUS  
CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with 4,4'-[oxybis(2,3,5,6-tetrafluoro-4,1-phenyleneoxy)]bis[benzenamine] and 4-(1,1,2,2-tetrafluoroethoxy)-1,3-benzenediamine (9CI) (CA INDEX NAME)

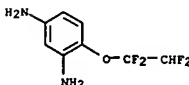
CM 1

CRN 129669-76-7  
CMF C24 H12 F8 N2 O3



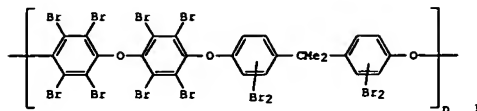
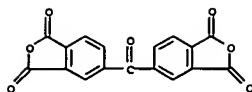
CM 2

CRN 61988-37-2  
CMF C8 H8 F4 N2 O



9 3

CRN 2421-28-5  
CMF C17 H6 07

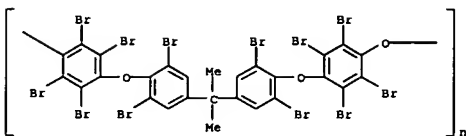


AB The title polyethers with good solubility to organic solvents have repeating units  
I ( $n = 21$ ). Thus, decabromodiphenyl ether 41.8, decabromobisphenol A 41.8, K2CO3 179, and 18-crown-6 ether 11.3 mmol were heated in dimethylacetamide at 80° for 24 h to give a polyether (in 54% yield) with m.p. 188.4°. Br content 71.0%, and weight-average mol. weight 1600, which showed good solubility (>2.5 g/dL) in pyridine, and fair soluble in C6H6, MePh. THF. CHCl3, and xylene.

SUBSTANCE: CBH6, MePH, THF, CHCl3, and xylene.  
 ACCESSION NUMBER: 1993:169851 CAPLUS  
 DOCUMENT NUMBER: 118:169851  
 TITLE: Bromine-containing polyethers for flame retardants  
 INVENTOR(S): Moribe, Isamu; Saito, Takayuki  
 PATENT ASSIGNEE(S): Hitachi Chemical Co., Ltd. Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.  
 CODEN: JK00AF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04288329	A2	19921013	JP 1991-52481	19910318
PRIORITY APPLN. INFO.:			JP 1991-52481	19910318

IT 146786-99-4P  
RL: PREP (Preparation)  
(preparation of, with good solubility in organic solvents, for flame retardants)  
RN 146786-99-4 CAPLUS  
CN  
Poly[oxy(2,3,5,6-tetrabromo-1,4-phenylene)oxy(2,6-dibromo-1,4-phenylene)(1-methylethylidene)(3,5-dibromo-1,4-phenylene)oxy(2,3,5,6-tetrabromo-1,4-phenylene)] [9CI], (CA INDEX NAME)



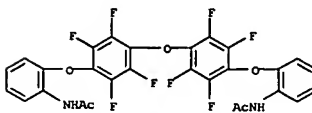
ANSWER 114 OF 231 CAPLOS COPYRIGHT 2005 ACS ON SIN  
AB Bifunctional monomers for heat-resistant polymers were synthesized by nucleophilic substitution of F atoms in hexafluorobenzene and decafluorobiphenyl ether. Their spectral characteristics and some properties are presented.

PROCEEDINGS ARE PRESENTED:  
 ACCESSION NUMBER: 1993:125096 CAPLUS  
 DOCUMENT NUMBER: 118:125096  
 TITLE: Synthesis of monomers and their derivatives  
 containing  
 perfluoroaromatic or polyfluoroalkoxy fragments  
 AUTHOR(S): Sheludko, E. V.; Tsyplina, O. N.; Golod, L. P.;  
 Rozhenko, A. B.  
 CORPORATE SOURCE: Inst. Bloorg. Khim. Neftekhim., Kiev, USSR  
 SOURCE: Doklady Akademii Nauk Ukrainskoi SSR (1991), (7),  
 112-17  
 CODEN: DANSEM; ISSN: 0868-8044  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian

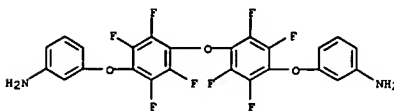
```

IT 145687-53-2P
    RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation and characterization of)
RN 145687-53-2 CAPLUS
CN  Acetamide, N,N'-(oxybis[(2,3,5,6-tetrafluoro-4,1-phenylene)oxy-2,1-
    phenylene]]bis- (9CI) (CA INDEX NAME)

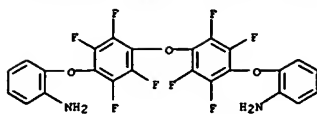
```



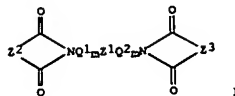
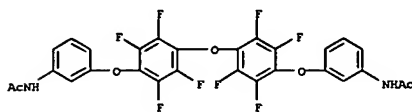
IT	145687-50-9P 145687-51-0P
	RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
	(preparation and reaction of, with acetic or maleic anhydrides)
RN	145687-50-9 CAPLUS
CN	Benzenamine, 3,3'-( $\text{[oxybis(2,3,5,6-tetrafluoro-4,1-phenyleneoxy)]bis-}$ (9CI) (CA INDEX NAME)



RN 145687-51-0 CAPLUS  
CN Benzenamine, 2,2'-[oxybis[(2,3,5,6-tetrafluoro-4,1-phenylene)oxy]]bis-(9CI) (CA INDEX NAME)



IT 145687-52-1P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 145687-52-1 CAPLUS  
 CN Acetamide, N,N'-[oxybis[(2,3,5,6-tetrafluoro-4,1-phenylene)oxy-3,1-phenylene]]bis- (9CI) (CA INDEX NAME)



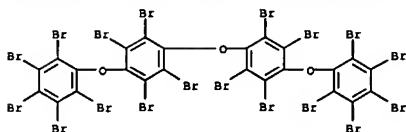
AB The title compns. contain 100 parts polyolefins, 0.01-1 part phenolic antioxidants and epoxides, resp., and 51 fireproofing agents selected from poly(bromostyrene), the imides I (Z1 = alkylene, arylene, or sulfonyl, Z2, Z3 = brominated arylene, brominated bicycloalkylene, or brominated epoxy cycloalkylene, Q1, Q2 = arylene or brominated arylene, m = 0 or 1), Q30 (Q40)nQ5 (Q3, Q5 = brominated aryl, Q4 = brominated arylene, n = 1 or 2). Thus, a composition of polypropylene 100, N,N'-ethylenebis(tetrabromophthalimide) 34, Sb2O3 17, tetrakis[methylene-3-(3',5'-di-tert-butyl-4'-hydroxyphenyl)propionate]methane (II) 0.3, Araldite GT7004 (III) 0.1 part had 150' oven life 61 days, compared with <1 for a similar composition containing 1.0 part Ca stearate in place of II and III.

ACCESSION NUMBER: 1992:195539 CAPLUS  
 DOCUMENT NUMBER: 116:195539  
 TITLE: Fire-resistant polyolefin compositions containing phenolic antioxidants and epoxides  
 INVENTOR(S): Aratake, Kazuhiko; Nakajima, Yoichi  
 PATENT ASSIGNEE(S): Chisso Corp., Japan  
 SOURCE: Jpn. Kokai Tokyo Koho, 50 pp.  
 CODEN: JJOCAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03231946	A2	19911015	JP 1990-211805	19900810
JP 2917172	B2	19990712		

PRIORITY APPLN. INFO.: JP 1989-264203 A1 19891011  
 JP 1989-320139 A1 19891208

IT 131644-78-5  
 RL: USES (Uses)  
 (fireproofing agents, propylene polymers containing phenolic antioxidants and)  
 RN 131644-78-5 CAPLUS  
 CN Benzene, 1,1'-oxybis[2,3,5,6-tetrabromo-4-(pentabromophenoxy)- (9CI) (CA INDEX NAME)



L42 ANSWER 116 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB A multilayer printed circuit board, comprising a plurality of alternately laminated layers of insulating layers and circuit conductor layers having a signal transmission delay time of 6.0 ns/m or less, excellent in heat resistance, adhesive, fire retardance, etc., can be produced by forming insulating layers using a fluorine-containing thermosetting resin composition

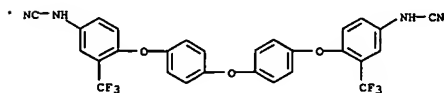
ACCESSION NUMBER: 1992:74401 CAPLUS  
 DOCUMENT NUMBER: 116:74401  
 TITLE: Multilayer printed circuit board and its production  
 INVENTOR(S): Nagai, Akira; Nishimura, Shin; Suzuki, Masahiro; Suzuki, Masao; Katagiri, Junichi; Takahashi, Akio; Mukoh, Akio  
 PATENT ASSIGNEE(S): Hitachi, Ltd., Japan  
 SOURCE: Eur. Pat. Appl., 26 pp.  
 CODEN: EPOXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 449292	A2	19911002	EP 1991-105010	19910328
EP 449292	A3	19940105		
EP 449292	B1	19970820		

R: DE, FR, GB  
 JP 03283492 A2 19911213 JP 1990-80754 19900330  
 JP 07120858 B4 19951220  
 US 5352762 A 19941004 US 1991-676383 19910328  
 PRIORITY APPLN. INFO.: JP 1990-80754 A 19900330

IT 138532-96-4P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and reaction of, for insulators for multilayer printed circuit boards)

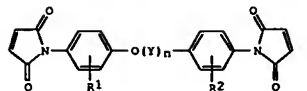
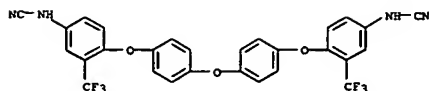
RN 138532-96-4 CAPLUS  
 CN Cyanamide, [oxybis[4,1-phenyleneoxy[3-(trifluoromethyl)-4,1-phenylene]]bis- (9CI) (CA INDEX NAME)



IT 138532-97-5P  
 RL: PREP (Preparation)  
 (preparation of, for insulators for multilayer printed circuit boards)  
 RN 138532-97-5 CAPLUS  
 CN Cyanamide, [oxybis[4,1-phenyleneoxy[3-(trifluoromethyl)-4,1-phenylene]]bis-, homopolymer (9CI) (CA INDEX NAME)

CN 1





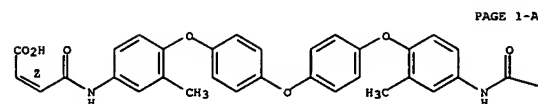
AB Title compds. I [R<sub>1</sub>, R<sub>2</sub> = Cl-3 alkyl, R<sub>2</sub> = H when n = 0; Y = (C<sub>6</sub>H<sub>4</sub>O)m, (C<sub>6</sub>H<sub>4</sub>OC<sub>6</sub>H<sub>4</sub>O)m, C<sub>6</sub>H<sub>4</sub>OC<sub>6</sub>H<sub>4</sub>O, wherein Z = SO<sub>2</sub>, S, CO, CH<sub>2</sub>, Me<sub>3</sub>C; m = 1-6; n = 0, 1], are prepared 4,4'-Dibromo-3-methyldiphenyl ether (preparation given) was added to aqueous NH<sub>3</sub> and CuSO<sub>4</sub>.5H<sub>2</sub>O and heated to 210° to give 4,4'-diamino-3-methyldiphenyl ether to which in acetone under N was added maleic anhydride to give the appropriate maleamic acid. To the stirred reaction mixture in acetone was added Ac<sub>2</sub>O and fused AcONa and refluxed

to give I (R<sub>1</sub> = 3-Me, Y<sub>m</sub> = null, R<sub>2</sub> = H).  
 ACCESSION NUMBER: 1992:6404 CAPLUS  
 DOCUMENT NUMBER: 116:6404  
 TITLE: Preparation of phenyl ether bismaleimides.  
 INVENTOR(S): Eidelman, Chaim; Shorr, Leonard; Hermolin, Joshua; Oren, Jakob; Adda, Michel  
 PATENT ASSIGNEE(S): Bromine Compounds Ltd., Israel  
 SOURCE: Eur. Pat. Appl., 25 pp.  
 CODEN: EPXKDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 446718	A2	19910918	EP 1991-103074	19910301
EP 446718	A3	19920819		
R: BE, CH, DE, ES, FR, GB, IT, LI, NL				
JP 04235147	A2	19920824	JP 1991-125697	19910308
PRIORITY APPLN. INFO.:			IL 1990-93686	A 19900308
			IL 1991-97302	A 19910220

OTHER SOURCE(S): MARPAT 116:6404  
 IT 137855-13-1P  
 RL: SPN (Synthetic preparation): PREP (Preparation)  
 (preparation and dehydrocyclization of)  
 RN 137855-13-1 CAPLUS  
 CN 2-Butenoic acid, 4,4'-[oxybis[4,1-phenyleneoxy(3-methyl-4,1-phenylene)imino]bis[4-oxo-, (Z,Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

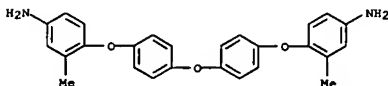


PAGE 1-A



PAGE 1-B

IT 137380-15-5  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with maleic anhydride)  
 RN 137380-15-5 CAPLUS  
 CN Benzenamine, 4,4'-[oxybis(4,1-phenyleneoxy)]bis[3-methyl- (9CI) (CA INDEX NAME)

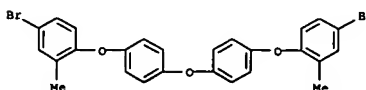


AB A process for the preparation of 4-hydroxyphenyl ethers R<sub>1</sub>(4-HO)C<sub>6</sub>H<sub>3</sub>OYnC<sub>6</sub>H<sub>3</sub>R<sub>2</sub>(OH-4) (R<sub>1</sub>, R<sub>2</sub> = alkyl; n = 0, 1; Y = 4-PhO, p-biphenyloxy, etc.) comprises the treatment of R<sub>1</sub>(4-Br)C<sub>6</sub>H<sub>3</sub>OYnC<sub>6</sub>H<sub>3</sub>R<sub>2</sub>(Br-4) (same R<sub>1</sub>, R<sub>2</sub>, n, Y) with a mixture containing a basic aqueous medium, an alc., and a Cu compound as catalyst. The 4-hydroxyphenyl ethers thus prepared are claimed. Bromination of PhOC<sub>6</sub>H<sub>4</sub>Me-3 gave 4-BrC<sub>6</sub>H<sub>4</sub>OC<sub>6</sub>H<sub>3</sub>BrMe-4,3; hydrolysis of the latter (171.0 g) in 30% aqueous NaOH (400 g) and EtOH (300 mL) in the presence of CuCl (2.0 g) at 200° gave a product containing 80% 4-HOC<sub>6</sub>H<sub>4</sub>OC<sub>6</sub>H<sub>3</sub>(OH)Me-4,3. Hydrolysis of 4,4'-bis(4"-bromo-2"-methylphenoxy)biphenyl gave 4,4'-bis(4"-hydroxy-2"-methylphenoxy)biphenyl. Addnl., 4,4'-bis(4"-hydroxy-2"-methylphenoxy)diphenyl sulfone and sulfide are claimed.

ACCESSION NUMBER: 1991:679581 CAPLUS  
 DOCUMENT NUMBER: 115:279581  
 TITLE: Process for the preparation of bis(4-hydroxyphenyl) ethers, 4-hydroxybiphenyl 4-hydroxyphenyl ethers, and their homologs  
 INVENTOR(S): Oren, Jacob; Hermolin, Joshua; Feldman, David; Zviely, Michael; Zamir, Dov; Keselman, Hugo  
 PATENT ASSIGNEE(S): Bromine Compounds Ltd., Israel  
 SOURCE: Eur. Pat. Appl., 17 pp.  
 CODEN: EPXKDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 446722	A1	19910918	EP 1991-103085	19910301
R: BE, CH, DE, ES, FR, GB, IT, LI, NL				
IL 93687	A1	19940412	IL 1990-93687	19900308
IL 97303	A1	19951031	IL 1991-97303	19910220
JP 04211628	A2	19920803	JP 1991-43591	19910308
PRIORITY APPLN. INFO.:			IL 1990-93687	A 19900308
			IL 1991-97303	A 19910220

OTHER SOURCE(S): CASREACT 115:279581; MARPAT 115:279581  
 IT 137379-99-8  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (hydrolysis of)  
 RN 137379-99-8 CAPLUS  
 CN Benzene, 1,1'-oxybis[4-(4-bromo-2-methylphenoxy)- (9CI) (CA INDEX NAME)

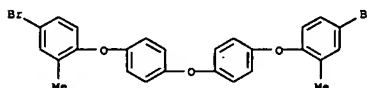


AB A process for the preparation of bis(4-bromophenyl) ethers, 4'-bromobiphenyl 4-bromophenyl ethers, and their homologs (4-Br)R1C6H3OYnC6H3R2 (Br-4) (R1, R2 = alkyl, R2 = H when n = 0; n = 0,1; Y = p-phenoxy, p-biphenyloxy, etc.) comprises the bromination of di-Ph ethers, biphenyl Ph ethers, and their homologs. The bromophenyl ethers thus prepared are claimed. Thus, bromination of PhOC6H4Me-3 with bromine gave 99% pure 4-BrC6H4OC6H3BrMe-4,3 in 93% yield. Addnl., 4,4'-bis(4"-bromo-2"-methylphenoxy)diphenyl sulfide, 4,4'-bis(4"-bromo-2"-methylphenoxy)diphenyl sulfone, 4,4'-bis(4"-bromo-2"-methylphenoxy)diphenylmethane and 4,4'-bis(4"-bromo-2"-methylphenoxy)benzophenone were also prepared

ACCESSION NUMBER: 1991:655796 CAPLUS  
DOCUMENT NUMBER: 115:255796  
TITLE: Novel brominated phenoxy compounds and processes for their preparation  
INVENTOR(S): Oren, Jacob; Hermolin, Joshua; Feldman, David; Zviely,  
PATENT ASSIGNEE(S): Michael; Hacham, Ronny  
SOURCE: Bromine Compounds Ltd., Israel  
Eur. Pat. Appl., 24 pp.  
CODEN: EPGKDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 446720	A2	19910918	EP 1991-103076	19910301
EP 446720	A3	19930616		
IL 93684	A1	19951031	IL 1990-93684	19900308
JP 07097348	A2	19950411	JP 1991-125698	19910308
			IL 1990-93684	A 19900308
			IL 1991-97300	A 19910220

PRIORITY APPLN. INFO.:  
OTHER SOURCE(S): CASREACT 115:255796; MARPAT 115:255796  
IT 137379-99-8P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)  
RN 137379-99-8 CAPLUS  
CN Benzene, 1,1'-oxybis(4-(4-bromo-2-methylphenoxy)- (9CI) (CA INDEX NAME)

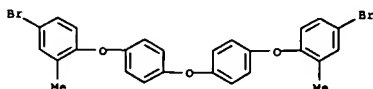


AB A process for the preparation of bis(4-aminophenyl) ethers, 4'-aminobiphenyl 4-aminophenyl ethers, and their homologs (4-H2N)R1C6H3OYnC6H3R2 (NH2-4) (R1, R2 = alkyl, R2 = H when n = 0; n = 0,1; Y = p-phenoxy, p-biphenyloxy, etc.) comprises the amination of bis(4-bromophenyl) ethers, 4'-bromobiphenyl 4-bromophenyl ethers, and their homologs with NH3 in aqueous solution in the presence of a Cu catalyst. The ethers thus prepared are claimed. Thus, bromination of PhOC6H4Me-3 gave 4-BrC6H4OC6H3BrMe-4,3; a mixture of the latter (102.6 g), aqueous 25% NH3 (500 mL), and CuSO4.5H2O (100 g) was heated in an autoclave to 210° to give 96-98% pure 4-H2NC6H4OC6H3(NH2)Me-4,3 in 88% yield. Addnl., 4,4'-bis(4"-amino-2"-methylphenoxy)benzophenone and 4,4'-bis(4"-amino-2"-methylphenoxy)diphenyl sulfide were also prepared

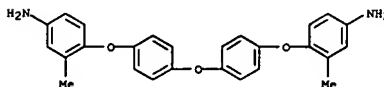
ACCESSION NUMBER: 1991:655795 CAPLUS  
DOCUMENT NUMBER: 115:255795  
TITLE: Amino phenoxy compounds and process for their preparation  
INVENTOR(S): Oren, Jacob; Hermolin, Joshua; Feldman, David; Zviely,  
PATENT ASSIGNEE(S): Michael; Zamir, Dov; Keselman, Hugo  
SOURCE: Bromine Compounds Ltd., Israel  
Eur. Pat. Appl., 20 pp.  
CODEN: EPGKDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 446719	A1	19910918	EP 1991-103075	19910301
US 5344986	A	19940906	US 1991-665908	19910307
JP 05178800	A2	19930720	JP 1991-125699	19910308
			IL 1990-93685	A 19900308
			IL 1991-97301	A 19910220

PRIORITY APPLN. INFO.:  
OTHER SOURCE(S): CASREACT 115:255795; MARPAT 115:255795  
IT 137379-99-8P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and amination of, copper-catalyzed)  
RN 137379-99-8 CAPLUS  
CN Benzene, 1,1'-oxybis[4-(4-bromo-2-methylphenoxy)- (9CI) (CA INDEX NAME)



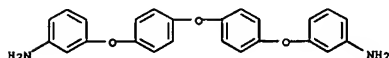
IT 137380-15-5P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)  
RN 137380-15-5 CAPLUS  
CN Benzenamine, 4,4'-[oxybis(4,1-phenyleneoxy)]bis[3-methyl- (9CI) (CA INDEX NAME)



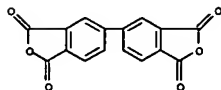
L42 ANSWER 121 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB Data on the quality of alignment for 130 different polymers, tested as alignment layers for surface stabilized ferroelec. liquid crystal displays (SSFLCs), are given. The thermal, mech. and elec. properties of the polymers are correlated with their ability to give good, bistable alignment in SSFLCs.

ACCESSION NUMBER: 1991:546495 CAPIUS  
 DOCUMENT NUMBER: 115:146495  
 TITLE: The relationship between the physical properties of the alignment layer and the quality of SSFLC (surface stabilized ferroelectric liquid crystal) cells  
 AUTHOR(S): Myrvold, Bernt O.  
 CORPORATE SOURCE: Autodisplay A/S, Oslo, N-0314, Norway  
 SOURCE: Molecular Crystals and Liquid Crystals (1991), 202, 123-47  
 CODEN: MCLCAS; ISSN: 0026-8941  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 110281-79-3, 4,4'-Di-(m-aminophenoxy)diphenyl ether-3,3',4,4'-diphenyltetracarboxylic anhydride polymer  
 RL: PRP (Properties) (properties of, for alignment layer of surface-stabilized ferroelec. liquid crystal cell)  
 RN 110281-79-3 CAPIUS  
 CN [5,5'-Bisobenzofuran]-1,1',3,3'-tetrone, polymer with 3,3'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

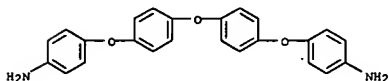
CH 1  
 CRN 58883-55-9  
 CHF C24 H20 N2 O3



CH 2  
 CRN 2420-87-3  
 CHF C16 H6 O6



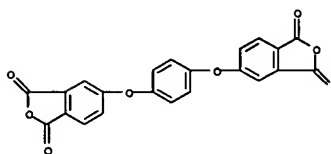
L42 ANSWER 122 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)



L42 ANSWER 122 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB Aryl diether diphthalic anhydrides were prepared by the reaction of a diphenol with 4-fluorophthalic anhydride and KF in the presence of a polar, aprotic solvent. The KF acts as an HF acceptor and obviates the need for preparing the disodium salt of the diphenol in a sep. step. The diether anhydrides of biphenol, hydroquinone, resorcinol, dihydroxybenzophenone, and bisphenol A were prepared and two of these dianhydrides were used to prepare aromatic polyether-polyimides via their reactions with selected diamines. These materials form creasable films having good thermal stability.

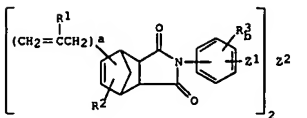
ACCESSION NUMBER: 1991:515191 CAPIUS  
 DOCUMENT NUMBER: 115:115191  
 TITLE: A novel route to aryl diether dianhydrides  
 AUTHOR(S): Schwartz, Willis T.  
 CORPORATE SOURCE: Dev. Cent., Occidental Chem. Corp., Niagara Falls, NY,  
 SOURCE: 14302, USA  
 High Performance Polymers (1990), 2(3), 189-96  
 CODEN: HPPOEX; ISSN: 0954-0083  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 102715-87-7P  
 RL: SPN (Synthetic preparation); PREP (Preparation) (films, preparation and creasability and thermal stability of)  
 RN 102715-87-7 CAPIUS  
 CN 1,3-isobenzofurandione, 5,5'-[1,4-phenylenebis(oxy)]bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CH 1  
 CRN 17828-53-4  
 CHF C22 H10 O8



CH 2  
 CRN 13080-88-1  
 CHF C24 H20 N2 O3

L42 ANSWER 123 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 GI

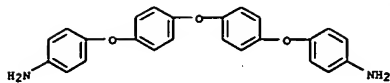


AB The title bisimides I (R1, R2 = H, Me; R3 = Cl-6 alkyl; Z1 = O, S, CO, CO2, carbonylimino, alkylidene, Z2 = mono- or polynuclear arylidene group; a = 1-3; b = 0-2), useful in thermoplastics with good mech. properties, are prepared Heating 3.0 mol allyl-5-norbornene-2,3-dicarboxylic anhydride and 1.5 mol 4,4'-[oxybis(p-phenyleneoxy)]dianiline in 3 L xylene at 90-136° with distillation of H2O gave 97.4% bisimide (II) with viscosity 2560 mPa-s at 150°. Heating II in a mold for 3 h at 200°, 3 h at 220°, and 6 h at 250° gave a polymer with flexural strength 132 N/mm2, tensile shear strength 10.5 N/mm2, and glass temperature 238°.

ACCESSION NUMBER: 1991:62942 CAPIUS  
 DOCUMENT NUMBER: 114:62942  
 TITLE: Preparation of bisimides of (meth)allyl derivatives of norbornenedicarboxylic acid  
 INVENTOR(S): Stockinger, Friedrich; Kramer, Andreas  
 PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.  
 SOURCE: Eur. Pat. Appl., 18 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 357558	A1	19900307	EP 1989-810630	19890824
EP 357558	B1	19940202		
US 5070163	A	19911203	US 1989-401350	19890831
JP 02256662	A2	19901017	JP 1989-227288	19890901
PRIORITY APPLN. INFO.:			CH 1988-3281	A 19880902

OTHER SOURCE(S): MARPAT 114:62942  
 IT 13080-88-1  
 RL: USES (Uses) (condensation of, with allylnorbornene dicarboxylic anhydride)  
 RN 13080-88-1 CAPIUS  
 CN Benzenamine, 4,4'-[oxybis(4,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)



AB The title ethers are prepared and used as heat- and migration-resistant fireproofing agents in polymers. Bis(4-phenoxyphenyl) ether was brominated with Br in ClCH<sub>2</sub>CH<sub>2</sub>Cl in the presence of AlCl<sub>3</sub> to give 97.1% octadecabromobis(4-phenoxyphenyl) ether (I) which exhibited 5% weight

loss at 413°. A mixture of polypropene 100, 1 40, and Sb<sub>2</sub>O<sub>3</sub> 13.3 parts was kneaded and pressed at 200° to give a sheet with limiting O index 23.7%, tensile strength 207 kg/cm<sup>2</sup>, and little color change during 100 h at 160°.

ACCESSION NUMBER: 1991:44238 CAPLUS  
DOCUMENT NUMBER: 114:44238  
TITLE: Halogenated bis(4-phenoxyphenyl) ethers and their use in fire-resistant polymer compositions  
INVENTOR(S): Kubo, Masaji; Matsuba, Takao; Kawabata, Koji  
PATENT ASSIGNEE(S): Tosoh Corp., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
CODEN: JKOXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

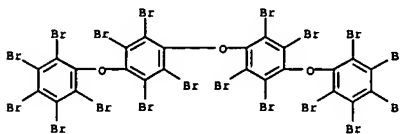
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02129137	A2	19900517	JP 1988-281425	19881109
JP 2636380	B2	19970730		

PRIORITY APPLN. INFO.: JP 1988-281425 19881109

OTHER SOURCE(S): MARPAT 114:44238

IT 131644-78-5P  
RL: PREP (Preparation)  
(preparation of, as fireproofing agent for polymers)

RN 131644-78-5 CAPLUS  
CN Benzene, 1,1'-oxybis(2,3,5,6-tetrabromo-4-(pentabromophenoxy))- (9CI) (CA INDEX NAME)



AB In an electrophotog. photoreceptor comprising an elec. conductive support and a photosensitive layer, the photosensitive layer(s) with irregular surface structure is based on an amorphous Si:H or amorphous C:H, and an organic binder layer and a protective lubricating layer having perfluoropolyoxyalkyl or perfluoropolyoxyalkylene skeletal groups is deposited over the photosensitive layer. The photoreceptor gives clear copies even when used under high-humidity conditions.

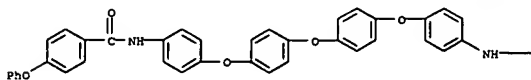
ACCESSION NUMBER: 1991:14872 CAPLUS  
DOCUMENT NUMBER: 114:14872  
TITLE: Amorphous silicon-type electrophotographic photoreceptor  
INVENTOR(S): Konuma, Shigeharu; Ishikawa, Noritoshi; Wakagi, Masatoshi; Tamahashi, Kunihiro; Hanazono, Masanobu; Shoji, Saburo; Nakakawaji, Takayuki; Ito, Yutaka; Komatsuzaki, Shigeki; Yamagishi, Tomoaki  
PATENT ASSIGNEE(S): Hitachi, Ltd., Japan; Hitachi Chemical Co., Ltd.  
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
CODEN: JKOXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02111962	A2	19900424	JP 1988-264093	19881021

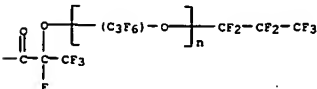
PRIORITY APPLN. INFO.: JP 1988-264093 19881021

IT 128691-14-5  
RL: USES (Uses)  
(lubricant, electrophotog. photoreceptor using)  
RN 128691-14-5 CAPLUS  
CN Poly[oxy(trifluoro(trifluoromethyl)-1,2-ethanediyl)],  $\alpha$ -(heptafluoropropyl)- $\omega$ -[1,2,2,2-tetrafluoro-1-[[[4-[4-[4-(4-phenoxybenzoyl)amino]phenoxy]phenoxy]phenyl]amino]carbonyl]ethoxy]-(9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L42 ANSWER 126 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB A description of the relaxation of Young's modulus (i.e., a decrease with increasing temperature and time) for highly oriented polyimide fibers and polymer films is suggested and expressed by the equation  $E = E_0(1 - T/W_0 \ln v_0/v)$ , where  $T$  is the absolute temperature,  $E$  is Young's modulus,  $E_0$  is its value at  $T = 0$ ,  $k$  is the Boltzmann constant,  $W_0$  is the activation energy of the relaxation of Young's modulus,  $v$  is the rate of elastic deformation, and  $v_0$  is a constant. The constant  $v_0 = (1012-1014)$  Hz and  $W_0$  coincides numerically with the activation energy of mech. fracture determined from the

temperature-time dependences of tensile strength. The relaxation of Young's modulus and the failure strength of drawn polymers are substantially identical in nature.

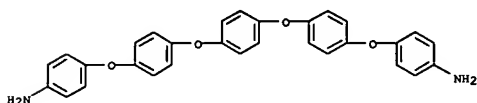
ACCESSION NUMBER: 1991:8178 CAPIUS  
 DOCUMENT NUMBER: 114:8178  
 TITLE: New approach to the description of Young's modulus for highly oriented polymers. I. Temperature-time dependences of Young's modulus  
 AUTHOR(S): Vettegren, V. I.; Bronnikov, S. V.; Korzhavin, L. N.; Frenkel, S. Ya.  
 CORPORATE SOURCE: A. F. Ioffe Physicotech. Inst., Leningrad, 194021, USSR  
 SOURCE: Journal of Macromolecular Science, Physics (1990), B29(4), 285-302  
 CODEN: JMAPBR; ISSN: 0022-2348  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 53938-98-0 53938-99-1  
 RL: USES (Uses)

(fiber, temperature-time dependences of Young's modulus of highly oriented, relaxation-based equation for)

RN 53938-98-0 CAPIUS  
 CH 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-(1,4-phenylenebis(oxy-4,1-phenyleneoxy))bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1

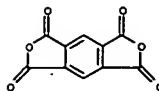
CRN 53563-78-3  
 CMF C30 H24 N2 O4



CM 2

CRN 89-32-7  
 CMF C10 H2 O6

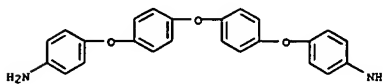
L42 ANSWER 126 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)



RN 53938-99-1 CAPIUS  
 CH 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-(oxybis(4,1-phenyleneoxy))bis(benzenamine) (9CI) (CA INDEX NAME)

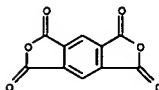
CM 1

CRN 13080-88-1  
 CMF C24 H20 N2 O3

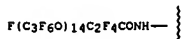
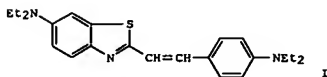


CM 2

CRN 89-32-7  
 CMF C10 H2 O6



L42 ANSWER 127 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 GI



AB The photosensitive layer or layers of the photoconductors contain lubricants and antioxidants, and the lubricant mols. have a structural part with a perfluoropolyoxyalkyl (or perfluoropolyoxyalkylene) group bound to another F-free structural part. Typically the lubricants have the formula  $R[Z1Z2m(Z3Ph)nH]k$  ( $R$  = perfluoropolyoxyalkyl, perfluoropolyoxyalkylene;  $Z1$  = single bond,  $CH_2$ ,  $CO$ ,  $CONH$ ;  $Z2$  =  $C2-3$  oxyalkylene;  $Z3$  = single bond,  $O$ ,  $CO_2$ ,  $CONH$ ,  $NHCO$ ,  $OcpH_2p$ ,  $CMe_2$ ;  $p = 1$ ,  $m \geq 0$ ;  $n \geq 1$ ;  $k = 1, 2$ ). The photoconductors have a high abrasion resistance and resistance to oxidation. Thus, an Al plate was coated with a charge-generating layer containing a nonmetal phthalocyanine, a silane coupling agent, and a silicone resin, and then with a charge-transporting layer containing a benzothiazole I, polycarbonate, a silane coupling agent, the lubricant II, and the antioxidant  $N,N'$ -diphenyl-p-phenylenediamine. Electrophotog. tests showed a -100 V residual voltage and 12.5 lines/mm resolution which were -105 V and 12.5 lines/mm after 5-h continuous corona charging-photodischarging cycles. The layer thickness did not change after a 20-min continuous rubbing with polyurethane blade.

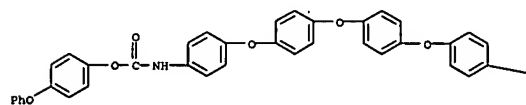
ACCESSION NUMBER: 1990:562496 CAPIUS  
 DOCUMENT NUMBER: 113:162496  
 TITLE: Electrophotographic photoconductors  
 INVENTOR(S): Suzuki, Shigeo; Shimizu, Ryuichi; Kokado, Hiroyoshi; Hosoya, Akira; Sugawara, Toshio; Kawanishi, Tsuneki; Tsunoda, Atsushi  
 PATENT ASSIGNEE(S): Hitachi, Ltd., Japan; Hitachi Chemical Co., Ltd.  
 SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
 CODEN: JKKXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

L42 ANSWER 127 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)  
 PATENT NO. KIND DATE APPLICATION NO. DATE  
 JP 02059760 A2 19900228 JP 1988-210751 19880826  
 PRIORITY APPLN. INFO.: JP 1988-210751 19880826

IT 129418-75-3 129418-76-4  
 RL: USES (Uses)  
 (lubricant, electrophotog. photoconductors containing antioxidants)

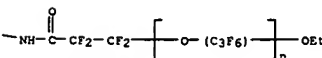
RN 129418-75-3 CAPIUS  
 CH Poly[oxy(trifluoro(trifluoromethyl)-1,2-ethanediyl)],  $\alpha$ -[1,1,2,2-tetrafluoro-3-oxo-3-[[4-[[4-[[4-[[4-phenoxyphenoxy]carbonyl]amino]phenoxy]phenoxy]phenyl]amino]propyl]-m-[tetrafluoro(trifluoromethyl)ethoxy]- (9CI) (CA INDEX NAME)

PAGE 1-A



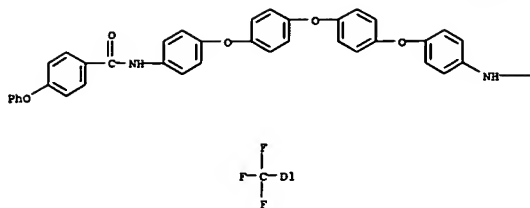
4 (D1-F)

PAGE 1-B



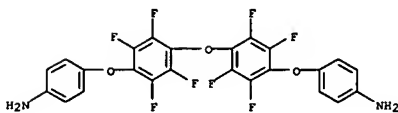
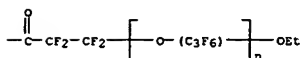
RN 129418-76-4 CAPIUS  
 CH Poly[oxy(trifluoro(trifluoromethyl)-1,2-ethanediyl)],  $\alpha$ -[1,1,2,2-tetrafluoro-3-oxo-3-[[4-[[4-[[4-[[4-phenoxybenzoyl]amino]phenoxy]phenoxy]phenoxy]phenyl]amino]propyl]-m-[tetrafluoro(trifluoromethyl)ethoxy]- (9CI) (CA INDEX NAME)

PAGE 1-A



4 (D1 = F)

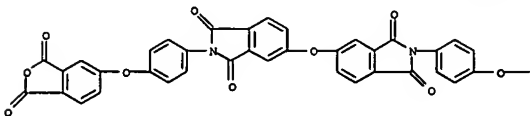
PAGE 1-B



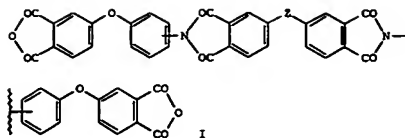
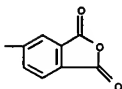
CM 2

CRN 129669-67-6  
CMF C44 H20 N2 O13

PAGE 1-A



PAGE 1-B



AB Reaction of aromatic dicarboxylic acid dianhydrides with 4-(4'-aminophenoxy)- or 4-(3'-aminophenoxy)phthalic acid gave imidodianhydrides (I) (Z = O, CO), which were polymerized with various aromatic diamines to give copolyimides containing repeating units with sym. and asym. distributed imide rings. Physicomech. properties (viscosity, tensile strength, elongation at break, elasticity modulus, softening temperature) and thermal degradation of the obtained polyimides were compared.

ACCESSION NUMBER: 1990:553161 CAPIUS

DOCUMENT NUMBER: 113:153161

TITLE: Synthesis and properties of copolyimides of a given structure

AUTHOR(S): Nosova, G. I.; Koton, M. M.; Laius, L. A.; Bolotnikova, L. S.; Fedorova, G. N.

CORPORATE SOURCE: Inst. Vysokomol. Soedin., USSR

SOURCE: Vysokomolekulyarnye Soedineniya, Seriya B: Kratkie Soobshcheniya (1990), 32(3), 211-15

CODEN: VYSBAI; ISSN: 0507-5483

DOCUMENT TYPE: Journal

LANGUAGE: Russian

IT 129669-77-8P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation and properties of)

RN 129669-77-8 CAPIUS

CN 1H-Isolindole-1,3(2H)-dione, 5,5'-oxybis[2-[4-[(1,3-dihydro-1,3-dioxo-5-isobenzofuranyl)oxy]phenyl]-, polymer with 4,4'-[oxybis(2,3,5,6-tetrafluoro-4,1-phenylene)oxy]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 129669-76-7

CMF C24 H12 F8 N2 O3

AB In an electrophotog. member comprising a support, a photoconductive layer, and a surface layer, the surface layer includes or has attached thereto a lubricating agent having perfluoropolyoxyalkyl or perfluoropolyoxyalkylene groups to form an organic surface-protective lubricating layer, and

fixing groups. The member has excellent moisture resistance, wear resistance, and cleaning properties; hence it has a long service life and high reliability.

ACCESSION NUMBER: 1990:506344 CAPIUS

DOCUMENT NUMBER: 113:106344

TITLE: Electrophotographic member with surface layer containing lubricant with perfluoropolyoxyalkyl or perfluoropolyoxyalkylene groups

INVENTOR(S): Ishikawa, Fuminori; Tanahashi, Kunihiko; Onuma, Shigeharu; Wakagi, Masatoshi; Hanatono, Masanobu; Shoji, Mitsuyoshi; Nakakawaji, Takayuki; Ito, Yutaka; Komatsuzaki, Shigeki; et al.

PATENT ASSIGNEE(S): Hitachi, Ltd., Japan; Hitachi Chemical Co., Ltd.

SOURCE: Eur. Pat. Appl., 29 pp.

CODEN: EPXKDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 356933	A2	19900307	EP 1989-115713	19890825
EP 356933	A3	19901205		
R: CH, DE, FR,	GB, LI, NL, SE			
JP 02062551	A2	19900302	JP 1988-212582	19880829
JP 06100842	B4	19941212		
JP 02103555	A2	19900416	JP 1988-255989	19881013
JP 02186358	A2	19900720	JP 1989-4950	19890113
JP 07120059	B4	19951220		
US 5073466	A	19911217	US 1989-394657	19890816
PRIORITY APPLN. INFO.:			JP 1988-212582	A 19880829
			JP 1988-255989	A 19881013
			JP 1989-4950	A 19890113

IT 128691-14-5

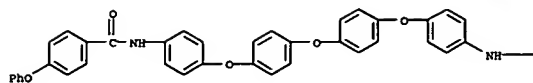
RL: USES (Uses)

(electrophotog. plate with surface layer containing lubricating agent from, for improved durability)

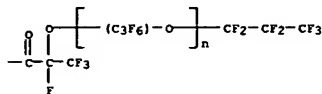
RN 128691-14-5 CAPIUS

CN Poly[oxy(trifluoro(trifluoromethyl)-1,2-ethanediyl)], n-(heptafluoropropyl)-n-[1,2,2,2-tetrafluoro-1-[[4-[4-[4-[(4-phenoxybenzoyl)amino]phenoxy]phenoxy]phenyl]amino]carbonyl]ethoxy]-(9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



AB The relationships between chemical structure and phys. and mech. properties

of a series of polyimides are investigated. The properties of polyimides based on anhydrides that have 0, 1, or 2 phenoxy linkages, and diamines that have either 1, 2, or 3 phenoxy linkages are explored; diamines incorporating sulfone groups are also examined. Softening temps. of the polyimides decrease with increasing number of phenoxy linkages, and with

the

transition from para to meta linkages, but increase with phenoxy and sulfone linkages. The polyamic acids based on 1,3-bis-(3,4-dicarboxyphenoxy)benzene exhibit amorphous structure with random coil packing; their structure remains unchanged in the imidized state. Time-dependent mech. properties of the polymers are examined. The possibility of thermal crosslinking is examined via rheol., solvent vapor sorption, and mass spectrometry measurements. The data suggest degradative crosslinking is a 2-stage process. The 1st stage proceeds through formation of free radicals by decarboxylation of unreacted amic acid groups and by degradation of terminal anhydride groups. The 2nd

stage proceeds through degradation of the main chains followed by random recombination. The study suggests the sulfone linkage is more susceptible to scission than the phenoxy linkage.

ACCESSION NUMBER: 1990:424838 CAPLUS

DOCUMENT NUMBER: 113:24838

TITLE: Mechanism of crosslinking of fusible poly(ether

imides) upon heating

AUTHOR(S): Koton, M. M.; Panov, Yu. N.; Svetlichnii, V. M.;

Shibaev, L. A.

CORPORATE SOURCE: Inst. Macromol. Compd., Leningrad, USSR

SOURCE: Polyimides: Mater., Chem. Charact., Proc. Int. Conf.

Polyimides, 3rd (1989), Meeting Date 1988, 403-17.

Editor(s): Feger, Claudius; Khojasteh, Mahmoud M.;

McGrath, James E. Elsevier: Amsterdam, Neth.

CODEN: 56SXAS

DOCUMENT TYPE: Conference

LANGUAGE: English

IT 53938-96-8F 53938-99-1P 72356-18-4P

74951-98-7P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(Preparation and structure-property relationships of)

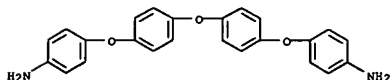
RN 53938-96-8 CAPLUS

CN 1,3-Isobenzofurandione, 5,5'-oxybis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 13080-88-1

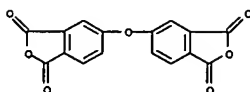
CMF C24 H20 N2 O3



CM 2

CRN 1823-59-2

CMF C16 H6 O7



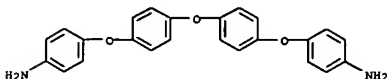
RN 53938-99-1 CAPLUS

CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 13080-88-1

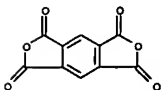
CMF C24 H20 N2 O3



CM 2

CRN 89-32-7

CMF C10 H2 O6



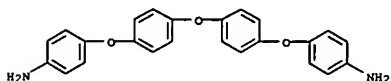
RN 72356-18-4 CAPLUS

CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 13080-88-1

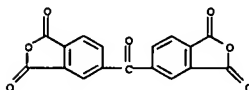
CMF C24 H20 N2 O3



CM 2

CRN 2421-28-5

CMF C17 H6 O7



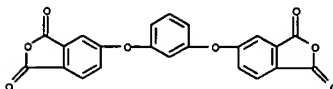
RN 74951-98-7 CAPLUS

CN 1,3-Isobenzofurandione, 5,5'-[1,3-phenylenebis(oxy)]bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 18959-92-7

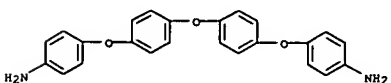
CMF C22 H10 O8



CM 2

CRN 13080-88-1

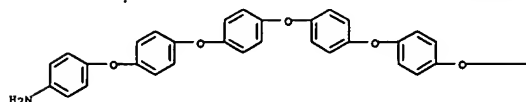
CMF C24 H20 N2 O3



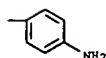
L42 ANSWER 131 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB Polyimides with good long-term heat stability, forming processability, mech. and elec. properties, and solvent and heat resistance are prepared from tetracarboxylic dianhydrides, diamines, and dicarboxylic anhydrides, the dianhydride/diamine molar ratio being 0.9-1.0 and the anhydride/diamine molar ratio being 0.001-1.0. Bis[4-(4-aminophenoxy)benzoyl]phenyl ether 1.0, pyromellitic dianhydride 0.95, and phthalic anhydride (I) 0.2 mol were used to prepare a polyimide (glass temperature 227°; logarithmic viscosity 0.55 dL/g at 35° and 0.5 g/100 mL 90:10 p-chlorophenol-PhOH) having good thermal stability, vs. poor without I.  
 ACCESSION NUMBER: 1990:99525 CAPIUS  
 DOCUMENT NUMBER: 112:99525  
 TITLE: Process for preparing polyimides with melt processability  
 INVENTOR(S): Ohta, Masahiko; Iiyama, Katsuki; Kawashima, Saburo; Tamai, Shoji; Oikawa, Hideaki; Yamaguchi, Akihiro  
 PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Inc., Japan  
 SOURCE: Eur. Pat. Appl., 43 pp.  
 CODEN: EPOXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 330505	A1	19890830	EP 1989-301875	19890224
R: CH, DE, FR, GB, IT, LI, NL, SE				
JP 01215825	A2	19890829	JP 1988-40706	19880225
JP 05051616	B4	19930803		
JP 01221428	A2	19890904	JP 1988-44619	19880229
JP 05051617	B4	19930803		
JP 01221429	A2	19890904	JP 1988-45780	19880301
JP 01221430	A2	19890904	JP 1988-45781	19880301
JP 02160829	A2	19900620	JP 1988-315086	19881215
JP 2564636	B2	19961218		
JP 02160830	A2	19900620	JP 1988-315087	19881215
JP 2564637	B2	19961218		
JP 02160831	A2	19900620	JP 1988-315088	19881215
JP 2565556	B2	19961218		
JP 02163124	A2	19900622	JP 1988-316122	19881216
JP 2558338	B2	19961127		
US 4937316	A	19900626	US 1989-313732	19890222
AU 8930734	A1	19891123	AU 1989-30734	19890224
AU 604402	B2	19901213		
PRIORITY APPLN. INFO.:				
			JP 1988-40706	A 19880225
			JP 1988-44619	A 19880229
			JP 1988-45780	A 19880301
			JP 1988-45781	A 19880301
			JP 1988-315086	A 19881215
			JP 1988-315087	A 19881215
			JP 1988-315088	A 19881215

L42 ANSWER 131 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)  
 JP 1988-316122 A 19881216  
 IT 125321-47-3P 125321-62-2P  
 RL: PREP (Preparation)  
 (preparation of moldable, heat-resistant)  
 RN 125321-47-3 CAPIUS  
 CN [5,5'-Bisobenzofuran]-1,1',3,3'-tetrone, polymer with 1,3-isobenzofurandione and 4,4'-[oxybis(4,1-phenyleneoxy)-4,1-phenyleneoxy]bis[benzenamine] (9CI) (CA INDEX NAME)  
 CH 1  
 CRN 77496-18-5  
 CMF C36 H28 N2 O5

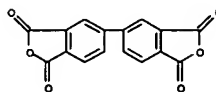


PAGE 1-A



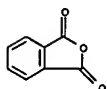
PAGE 1-B

CH 2  
 CRN 2420-87-3  
 CMF C16 H6 O6



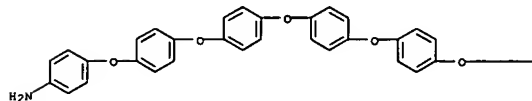
CH 3  
 CRN 85-44-9  
 CMF C8 H4 O3

L42 ANSWER 131 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)

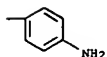


RN 125321-62-2 CAPIUS  
 CN [5,5'-Bisobenzofuran]-1,1',3,3'-tetrone, polymer with hexahydro-1,3-isobenzofurandione and 4,4'-[oxybis(4,1-phenyleneoxy)-4,1-phenyleneoxy]bis[benzenamine] (9CI) (CA INDEX NAME)  
 CH 1  
 CRN 77496-18-5  
 CMF C36 H28 N2 O5

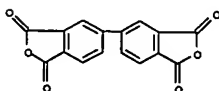
PAGE 1-A



PAGE 1-B

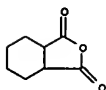


CH 2  
 CRN 2420-87-3  
 CMF C16 H6 O6



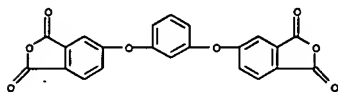
L42 ANSWER 131 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)

CH 3  
 CRN 85-42-7  
 CMF C8 H10 O3





L42 ANSWER 132 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB Complex studies of heating-induced changes of the phys. properties of fusible poly(ether imides) (PEI) differing in the chemical structure of the diamine fragment were performed. The PEI crosslinked on heating. The reaction is caused by free radical formation due to the decarboxylation of uncyclized groups, the decomposition of the terminal anhydride groups, and (in the second stage) the degradation of the main chains. The free radicals are recombined forming a three-dimensional network.  
 ACCESSION NUMBER: 1990:57393 CAPIUS  
 DOCUMENT NUMBER: 112:57393  
 TITLE: Evidence of crosslinking of fusible poly(ether imides)  
 AUTHOR(S): on heating  
 Koton, M. M.; Panov, Yu. N.; Svetlichnyi, V. M.; Bolotnikova, L. S.; Kulichikhin, S. G.; Shibaev, L.  
 A.  
 CORPORATE SOURCE: Inst. Macromol. Comp., Leningrad, 199004, USSR  
 SOURCE: Acta Polymerica (1989), 40(9), 598-602  
 CODEN: ACPODY; ISSN: 0323-7648  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 74951-98-7  
 RL: USES (Uses)  
 (crosslinking of fusible, on heating, mechanism of, phys. properties in relation to)  
 RN 74951-98-7 CAPIUS  
 CN 1,3-isobenzofurandione, 5,5'-[1,3-phenylenebis(oxy)]bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)  
 CH 1  
 CRN 18959-92-7  
 CMF C22 H10 O8

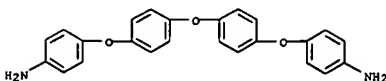


CH 2  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3

L42 ANSWER 133 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB The title laminates are prepared by spreading solns. of polyamic acids from aromatic tetracarboxylic acids and the diamines Z(C6H4-p-ZC6H4NH2-p)2 residue (Z = O, CO, S, SO2, CH2, CMe2, C(CF3)2; not necessarily identical) containing 21% organic compds. having solubility parameter (SP) 9.0-11.0 on water to form thin films, transferring the films to substrates, and cyclization.  
 A 5% 14.5:25.5 3,3',4,4'-biphenyltetracarboxylic dianhydride-(CF3)2C(C6H4-p-OC6H4NH2-p)2 copolymer solution in 1:1 AcNMe2-PhCOMe (SP 10.6) was spread on water to give a thin film; vs. gelation without PhCOMe. The film was transferred to an Al foil and cyclized by heat to give a uniform laminate.  
 ACCESSION NUMBER: 1989:634580 CAPIUS  
 DOCUMENT NUMBER: 111:234580  
 TITLE: Manufacture of uniform laminates from thin polyimide films  
 INVENTOR(S): Masutani, Noboru; Fujimura, Yasuo; Sakai, Isoji; Matsumoto, Tsunetaka  
 PATENT ASSIGNEE(S): Nitto Denko Corp., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp. CODEN: JKKXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

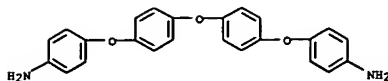
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 01063071	A2	19890309	JP 1987-221609	19870903
PRIORITY APPLM. INFO.:			JP 1987-221609	19870903

IT 72356-19-5P  
 RL: PREP (Preparation)  
 (ultrathin films for laminates, preparation of, by Langmuir method)  
 RN 72356-19-5 CAPIUS  
 CN [5,5'-Bis(isobenzofuran)-1,1',3,3'-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)  
 CH 1  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3



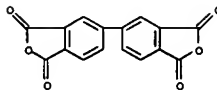
CH 2

L42 ANSWER 132 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)

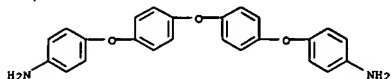


L42 ANSWER 133 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)

CRN 2420-87-3  
 CMF C16 H6 O6

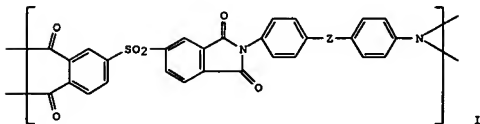


L42 ANSWER 134 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB Graphite fiber-reinforced polyimides prepared from aromatic diamines containing flexible ether groups had better toughness properties than com. available PMR-15. Improvements in the toughness of the polyimide resins were offset by a slight reduction in use temperature and slightly lower flexural and short beam shear properties at elevated temps.  
 ACCESSION NUMBER: 1989:498222 CAPLUS  
 DOCUMENT NUMBER: 111:98222  
 TITLE: Graphite/polyimide composites with improved toughness  
 AUTHOR(S): Delvigo, Peter  
 CORPORATE SOURCE: Lewis Res. Cent., Natl. Aeronaut. and Sp. Adm., Cleveland, OH, 44135, USA  
 SOURCE: Polymer Composites (1989), 10(2), 134-9  
 CODEN: PCOMDI; ISSN: 0272-8397  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 122331-87-7DD, reaction products with monomethyl norbornenyldicarboxylate  
 RL: SPN (Synthetic preparation); PREP (Preparation) (preparation and curing and toughness of graphite fiber-reinforced)  
 RN 122331-87-7 CAPLUS  
 CN 1,2-benzenedicarboxylic acid, 4,4'-carbonylbis-, ac,ar'-dimethyl ester, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3



CM 2  
 CRN 36928-64-0  
 CMF C19 H14 O9  
 CCI IDS  
 CM 3  
 CRN 2479-49-4  
 CMF C17 H10 O9

L42 ANSWER 135 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
 GI

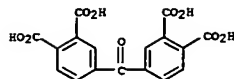


AB The title compns. with good heat resistance and elec. and mech. characteristics contain polyimides of repeating unit I (Z = S, SC6H4S, CMe2C6H4CMe2, XC6H4YC6H4X; X = O, S, CR1R2; Y = direct bond, O, S, SO2, CR1R2, CO; R1, R2 = H, halogen, C1-5 haloalkyl) and intrinsic viscosity 0.3-5.0 dL/g, dissolved in organic solvent(s), and prepared by imidation in an aprotic polar organic solvent and/or phenolic solvent. 4,4'-Bis(p-aminophenoxy)diphenyl sulfone was polymerized with di-Ph sulfone-3,3',4,4'-tetracarboxylic dianhydride in N-methylpyrrolidone at 25-30° for 1 h then heated at 160° for 5 h to give a polyimide solution. The polyimide had intrinsic viscosity (5 g/100 mL N-methylpyrrolidone, 25°) 0.7., decomposition temperature 565°, softening temperature 285°, tensile strength 12.2 kg/mm2, and modulus 271 kg/mm2.  
 ACCESSION NUMBER: 1989:458573 CAPLUS  
 DOCUMENT NUMBER: 111:58573  
 TITLE: Soluble polyimide composition and its manufacture  
 INVENTOR(S): Ikeda, Tsuyoshi; Sanami, Hiroshi; Nakazawa, Mikiro; Kawashima, Yuji  
 PATENT ASSIGNEE(S): New Japan Chemical Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.  
 CODEN: JKOXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 6400121	A2	19890105	JP 1988-31591	19880213
PRIORITY APPLN. INFO.:			JP 1987-32030	A1 19870213

IT 72356-17-3P  
 RL: IMF (Industrial manufacture); PREP (Preparation) (manufacture of, soluble, heat-resistant)  
 RN 72356-17-3 CAPLUS  
 CN 1,3-Isobenzofurandione, 5,5'-sulfonylbis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3

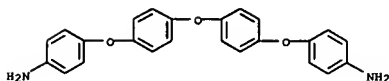
L42 ANSWER 134 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



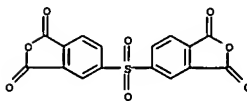
CM 4  
 CRN 67-56-1  
 CMF C H4 O

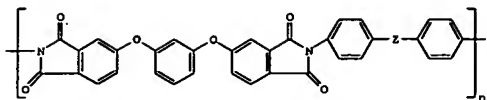
H3C-OH

L42 ANSWER 135 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



CM 2  
 CRN 2540-99-0  
 CMF C16 H6 O8 S





I

AB At temps. corresponding to melt-processing temps., the polyether-polyimides I (Z = O-p-C6H4SO2C6H4-p-O, O-p-C6H4OC6H4-p-O, S-p-C6H4SO2C6H4-p-S) underwent crosslinking by a radical mechanism. The composition of volatile products from heating of the polymers indicated probable formation of free radicals both at chain ends and along the polymer chain. The most thermally stable polymer was I (Z = S-p-C6H4SO2C6H4-p-S). At 350° the viscosity of I melts increased sharply with time after a certain induction period. The change in elasticity and paramagnetic center concentration at this temperature occurred in a manner typical for 1st-order reactions.

ACCESSION NUMBER: 1989:115755 CAPLUS  
DOCUMENT NUMBER: 110:115755  
TITLE: Crosslinking of molten poly(ether imides) during thermal processing  
AUTHOR(S): Koton, M. M.; Frenkel, S. Ya.; Panov, Yu. N.; Bolotnikova, L. S.; Svetlichnyi, V. M.; Shibaev, L. A.; Kulichikhin, S. G.; Krupnova, E. E.; Reutov, A. S.; Ushakova, I. L.  
CORPORATE SOURCE: Inst. Vysokomol. Soedin., Leningrad, USSR  
SOURCE: Vysokomolekulyarnye Soedineniya, Seriya A (1988), 30(11), 2425-30  
CODEN: VYSAAF; ISSN: 0507-5475  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian  
IT 74951-98-7

RL: USES (Uses)  
(crosslinking of melts of, at thermal-processing temps., mechanism of)  
RN 74951-98-7 CAPLUS  
CN 1,3-Isobenzofurandione, 5,5'-(1,3-phenylenebis(oxy))bis-, polymer with 4,4'-(oxybis(4,1-phenyleneoxy))bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1

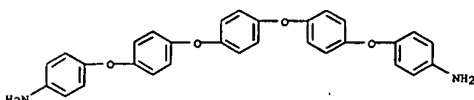
CRN 18959-92-7  
CMF C22 H10 O8

AB The compliance coeffs. ( $\gamma$ ) of repeating units of 3 polyoxyphenylene-polyppromellitimides were calculated to test an x-ray diffraction method for determining the title constns. Good correlation between calculated  $\gamma$  and experiment was achieved. The relation between conformation and mol. structure of the polymer chains, consisting of rodlike moieties separated by joint groups, was discussed. For the chains with ABB-ABB sequence, the most extended conformation was not planar.

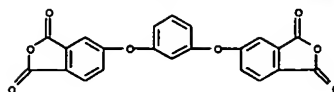
ACCESSION NUMBER: 1989:76377 CAPLUS  
DOCUMENT NUMBER: 110:76377  
TITLE: X-ray diffraction method for determination of the deformational force constants of atomic groups (for polyimides having oxygen linkages in the diamine component)  
AUTHOR(S): Ginzburg, B. M.; Magdalev, E. T.  
CORPORATE SOURCE: Inst. Mashinoved. im. Blagonravova, Leningrad, USSR  
SOURCE: Vysokomolekulyarnye Soedineniya, Seriya A (1988), 30(9), 2007-11  
CODEN: VYSAAF; ISSN: 0507-5475  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian  
IT 53938-98-0 53938-99-1

RL: FRP (Properties)  
(deformational force constns. of, determination of, by x-ray diffraction method)  
RN 53938-98-0 CAPLUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-(1,4-phenylenebis(oxy-4,1-phenyleneoxy))bis(benzenamine) (9CI) (CA INDEX NAME)

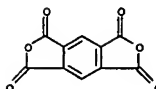
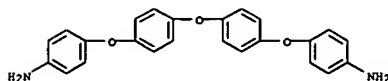
CM 1

CRN 53563-78-3  
CMF C30 H24 N2 O4

CM 2

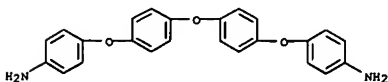
CRN 89-32-7  
CMF C10 H2 O6

CM 2

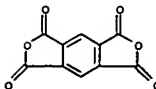
CRN 13080-88-1  
CMF C24 H20 N2 O3

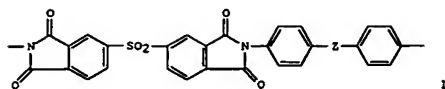
RN 53938-99-1 CAPLUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-(oxybis(4,1-phenyleneoxy))bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1

CRN 13080-88-1  
CMF C24 H20 N2 O3

CM 2

CRN 89-32-7  
CMF C10 H2 O6



AB Title polyimides containing repeating units I (Z = SC6H4S, X(C6H4YC6H4X2; X1-2 = O, S; Y = direct bond, O, S, SO2, CO) are prepared by treating di-Ph sulfone-3,3',4,4'-tetracarboxylic acid deriva. with Z(C6H4NH2-4)2. Thus, a solution of 4,4'-bis(p-aminophenoxy)diphenyl sulfone in N-methyl-2-pyrrolidone was treated with di-Ph sulfone-3,3',4,4'-tetracarboxylic dianhydride at 25-30° for 1 h and the mixture was heated at 160° for 5 h to give a polyimide with intrinsic viscosity 0.79 dl/g, 10%-weight-loss temperature 565°, softening point 285°, tensile strength 12.2 kg/mm2, and modulus 271 kg/mm2.

ACCESSION NUMBER: 1989:58329 CAPLUS

DOCUMENT NUMBER: 110:58329

TITLE: Solvent-soluble aromatic polyimides and their manufacture

INVENTOR(S): Ikeda, Tsuyoshi; Mami, Hiroshi; Nakazawa, Mikiro; Kawashima, Yuji

PATENT ASSIGNEE(S): New Japan Chemical Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JGXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63199239	A2	19880817	JP 1987-32029	19870213
JP 05062893	B4	19930909		

PRIORITY APPLN. INFO.: JP 1987-32029 19870213

IT 72356-17-3P

RL: PREP (Preparation)  
(preparation of, solvent-soluble)

RN 72356-17-3 CAPLUS

CM 1,3-Isobenzofurandione, 5,5'-sulfonylbis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 13080-88-1

CMF C24 H20 N2 O3

L42 ANSWER 139 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN

AB Polymers containing the units [-C6H4-p-N(Ph)C6H4-p-Z-] [Z = S, SXO, SXs, OXO

(X = arylene); d.p. 3-500) become elec. conductive when doped. Heating PhN(C6H4Br-p)2 40.3, S(C6H4ONa-p)2 24.8, and N-phenylpyrrolidone 500

parts at 250° for 5 h gave 70% polymer with intrinsic viscosity (DMF, 25°) 0.7 dl/g and decomposition temperature >360°.

ACCESSION NUMBER: 1988:56818 CAPLUS

DOCUMENT NUMBER: 108:56818

TITLE: Conductive polymers containing triphenylamine units

INVENTOR(S): Naarmann, Herbert; Heinz, Gerhard

PATENT ASSIGNEE(S): BASF A.-G., Fed. Rep. Ger.

SOURCE: Ger. Offen., 3 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3610648	A1	19871001	DE 1986-3610648	19860329
			DE 1986-3610648	19860329

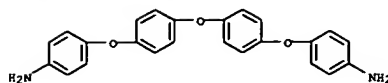
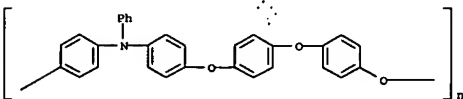
PRIORITY APPLN. INFO.: DE 1986-3610648 19860329

IT 112492-64-5P

RL: IMP (Industrial manufacture); PREP (Preparation)  
(heat-resistant, manufacture of)

RN 112492-64-5 CAPLUS

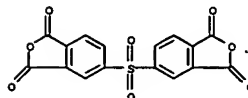
CM Poly[oxy-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenylene(phenylimino)-1,4-phenylene] (9CI) (CA INDEX NAME)



CM 2

CRN 2540-99-0

CMF C16 H6 O8 S



L42 ANSWER 140 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN

AB The  $\alpha$ - and  $\beta$ -transition temps., dielec. loss (tg  $\delta$ ) in the transition region, and the activation energy of relaxation were determined

for a series of 14 O- and S-containing polyimides with multiring aromatic fragments. The temperature dependencies of tg  $\delta$  and elec. capacity were measured at 120-570 K. The results were discussed in terms of correlations with the mol. structure of chain fragments. A correlation was observed between the structure-dependent changes of the  $\alpha$ - and  $\beta$ -transition temps.

ACCESSION NUMBER: 1988:6748 CAPLUS

DOCUMENT NUMBER: 108:6748

TITLE: Dielectric relaxation in oxygen- and sulfur-containing

aromatic polyimides containing many aromatic rings  
Borisova, T. I.; Malininskaya, V. P.; Krupnova, E. E.

SVETLICHNYI, V. M.; KOTON, M. M.

Inst. Vysokomol. Soedin., Leningrad, USSR

Vysokomolekulyarnye Soedineniya, Seriya B: Kratkie

Soobshcheniya (1987), 29(9), 713-18

CODEN: VYSBAI; ISSN: 0507-5483

DOCUMENT TYPE: Journal

LANGUAGE: Russian

IT 53938-96-8 74951-98-7

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)

(dielec. relaxation in)

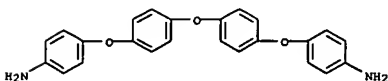
RN 53938-96-8 CAPLUS

CM 1,3-Isobenzofurandione, 5,5'-oxybis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 13080-88-1

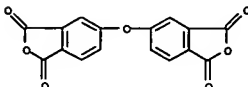
CMF C24 H20 N2 O3



CM 2

CRN 1823-59-2

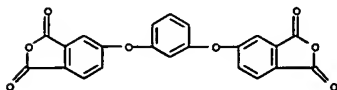
CMF C16 H6 O7



RN 74951-98-7 CAPLUS  
 CN 1,3-Isobenzofurandione, 5,5'-[1,3-phenylenebis(oxy)]bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

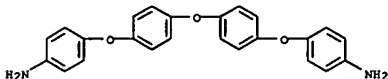
CM 1

CRN 18959-92-7  
 CMF C22 H10 O8



CM 2

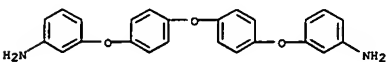
CRN 13080-88-1  
 CMF C24 H20 N2 O3



RL: USES (Uses)  
 (alignment control films, for liq.-crystal displays)  
 RN 110281-79-3 CAPLUS  
 CN [5,5'-Bis(isobenzofuran)-1,1',3,3'-tetrone, polymer with 3,3'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)]

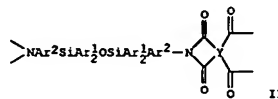
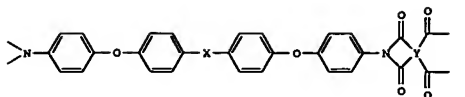
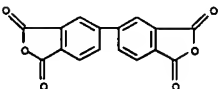
CM 1

CRN 58883-55-9  
 CMF C24 H20 N2 O3



CM 2

CRN 2420-87-3  
 CMF C16 H6 O6



AB In the title devices, which have a chiral smectic C liquid crystal layer sandwiched between a pair of substrates,  $\geq 1$  of which are provided with transparent electrodes, orientation films prepared from low-temperature-treated soluble polyimide solns. are placed on  $\geq 1$  of the substrates. The polyimides may contain repeating units I (X = SO<sub>2</sub>, O,

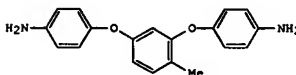
CO,

CH<sub>2</sub>, S, CH<sub>2</sub>C(CF<sub>3</sub>)<sub>2</sub>; Y = tetracarboxylic dianhydride residue) and optionally II (Ar<sub>1</sub> = alkyl, aryl; Ar<sub>2</sub> = alkylene, (alkyl)phenylene). The devices exhibit good memory and high-contrast images. Thus, a solution of 4,4'-di(m-aminophenoxy)diphenyl ether-3,3',4,4'-diphenyltetracarboxylic dianhydride copolymer was applied to electrode-equipped substrates and heated at 80° to give 200-Å polyimide films, which were rubbed with a cloth. A display cell prepared using 2 of the above elements and C6H13O-p-C6H4OCO(p-C6H4)2OCHMeC6H13 liquid crystals exhibited good memory and a contrast ratio of 450.

ACCESSION NUMBER: 1987:545007 CAPLUS  
 DOCUMENT NUMBER: 107:145007  
 TITLE: Ferroelectric liquid-crystal devices  
 INVENTOR(S): Yokokura, Hisao; Kondo, Katsumi; Hanawa, Yasuo; Era, Susumu; Iwasaki, Kishiro; Nakada, Tadao; Isogai, Masato; Kitamura, Teruo; Kobi, Akio; Shindo, Yasuhiko  
 PATENT ASSIGNEE(S): Hitachi, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JPOKAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 62028713	A2	19870206	JP 1985-167597	19850731

PRIORITY APPLM. INFO.:  
 IT 110281-79-3



AB The following diamines were shown to inhibit the oxidation of PhEt and PhCHMe<sub>2</sub>: (4-H<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>)<sub>2</sub>X (X = O, 3-OC<sub>6</sub>H<sub>4</sub>O, 4-OC<sub>6</sub>H<sub>4</sub>OC<sub>6</sub>H<sub>4</sub>O-4), 4-H<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>NH<sub>2</sub>, benzidine, 4-PhOC<sub>6</sub>H<sub>4</sub>NH<sub>2</sub>, and I. Rate consts. and activation parameters for the reactions of these diamines with peroxy radicals were determined

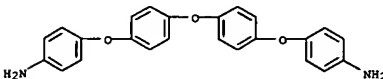
In

general, the activation energies were 24 ± 3 kJ/mol.

ACCESSION NUMBER: 1987:195716 CAPLUS  
 DOCUMENT NUMBER: 106:195716  
 TITLE: Diamines of polyphenyl oxides as inhibitors of liquid-phase oxidation of hydrocarbons  
 AUTHOR(S): Nikolaevskii, A. N.; Kucherenko, V. N.; Enal'ev, V. D.; Kopeikin, V. V.  
 CORPORATE SOURCE: Donetsk. Gos. Univ., Donetsk, USSR  
 SOURCE: Kinetika i Kataliz (1986), 27(5), 1241-4  
 CODEN: KOKTAA; ISSN: 0453-8811  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian

IT 13080-88-1  
 RL: PRP (Properties)  
 (antioxidant, for alkylbenzenes)

RN 13080-88-1 CAPLUS  
 CN Benzenamine, 4,4'-[oxybis(4,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)



L42 ANSWER 143 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB Title compds. (m-O2NC6H4O-p-C6H4)2Z (Z = direct bond, C1-10 hydrocarbon, C(CF3)2, CO, S, SO, SO2, O), useful as intermediates for heat resistant polyamides and polyimides, was prepared by condensation of (4-HOC6H4)2Z with

1,3-C6H4(NO2)2 (I) in aprotic polar solvents in the presence of bases. Thus, heating 4,4'-dihydroxybiphenyl, I, and K2CO3 in DMF at 145-150° for 16 h gave 99.5% 4,4'-bis(3-nitrophenoxy)biphenyl.

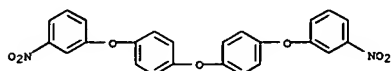
ACCESSION NUMBER: 1987:84146 CAPIUS  
 DOCUMENT NUMBER: 106:84146  
 TITLE: Bis(3-nitrophenoxy) compounds  
 INVENTOR(S): Yoshikawa, Yukihiro; Yamaguchi, Keisaburo; Sugimoto, Kenichi; Tanabe, Yoshimitsu; Yamaguchi, Teruhiro  
 PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Inc., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JTOXAF

DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

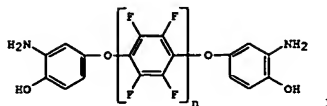
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 61194050	A2	19860828	JP 1985-32567	19850222
JP 07010812	B4	19950208		

PRIORITY APPLN. INFO.: JP 1985-32567 19850222

IT 105113-04-0F, 4,4'-Bis(3-nitrophenoxy)diphenyl ether  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of, as intermediate for polyamides and polyimides)  
 RN 105113-04-0 CAPIUS  
 CN Benzene, 1,1'-oxybis[4-(3-nitrophenoxy)- (9CI) (CA INDEX NAME)]



L42 ANSWER 144 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 GI



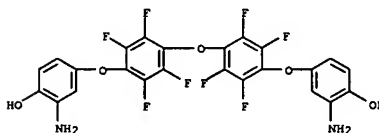
AB Bis(3-amino-4-hydroxyphenoxy)perfluoroarylenes I (n = 1, 2) are used as monomers in producing polybenzoxazoles with increased thermal and hydrolytic stability.

ACCESSION NUMBER: 1987:67818 CAPIUS  
 DOCUMENT NUMBER: 106:67818  
 TITLE: Bis(3-amino-4-hydroxyphenoxy)perfluoroarylenes as monomers for producing polybenzoxazoles with higher thermal and hydrolytic stability  
 INVENTOR(S): Ignatenko, N. M.; Malichenko, B. F.; Yazlovitskii, A. V.  
 PATENT ASSIGNEE(S): Institute of Physical-Organic Chemistry and Coal Chemistry, Kiev, USSR  
 SOURCE: U.S.S.R. From: Otkrytiya, Izobret. 1986, (36), 280.  
 CODEN: URXKAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Russian  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 1205518	A1	19860930	SU 1983-3655549	19831024

PRIORITY APPLN. INFO.: SU 1983-3655549 19831024

IT 106691-92-3D, polymers  
 RL: USES (Uses)  
 (thermal and hydrolytic stability of)  
 RN 106691-92-3 CAPIUS  
 CN Phenol, 4,4'-[oxybis(2,3,5,6-tetrafluoro-4,1-phenyleneoxy)]bis(2-amino- (9CI) (CA INDEX NAME)]



L42 ANSWER 145 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB The amidation kinetics of 1,3-bis(3,4-dicarboxyphenoxy)benzene dianhydride  
 (I) [18959-92-7] and 3,3',4,4'-tetracarboxybenzophenone dianhydride (II) [2421-28-5] with aniline [62-53-3] and its Me, PhO, Br, NO2, and MeO derivs. and the title diamines was studied by IR spectroscopy in AcNMe2

at 298 K. The cyclization kinetics of o-carboxyamides from I and the above mono- and diamines was studied by NMR in AcNMe2 at 433 K. The effect of amine substituents on the rate of amidation was described by means of the Gammett equations with parameter ρ = -3.6 and -3.4 for I and II, resp. There was a weak dependence of the rate of cyclization of o-carboxyamides on the structure of amines. The parameter ρ for cyclization of model o-carboxyanilides was -0.2.

ACCESSION NUMBER: 1987:67704 CAPIUS  
 DOCUMENT NUMBER: 106:67704  
 TITLE: Kinetic study of the formation of aromatic polyimides from multinuclear bridge-containing aromatic diamines  
 AUTHOR(S): Svetlichnyi, V. M.; Antonov, N. G.; Chernitsa, B. V.; Denisov, V. M.; Kol'tsov, A. I.; Kudryavtsev, V. V.; Koton, M. M.

CORPORATE SOURCE: Inst. Vysokomol. Soedin., Leningrad, USSR  
 SOURCE: Vysokomolekulyarnye Soedineniya, Seriya A (1986), 28(11), 2412-18  
 CODEN: VYSAAF; ISSN: 0507-5475

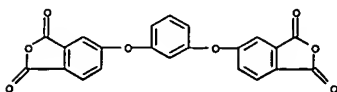
DOCUMENT TYPE: Journal  
 LANGUAGE: Russian

IT 74951-98-7  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (cyclocondensation of, intermol., kinetics of)

RN 74951-98-7 CAPIUS  
 CN 1,3-isobenzofurandione, 5,5'-[1,3-phenylenebis(oxy)]bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CH 1

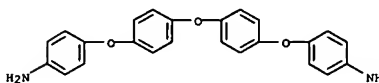
CRN 18959-92-7  
 CMF C22 H10 O8



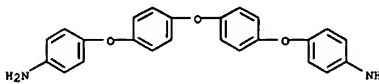
CH 2

CRN 13080-88-1  
 CMF C24 H20 N2 O3

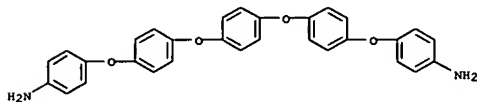
L42 ANSWER 145 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)



IT 13080-88-1  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (polymerization of, with tetracarboxylic acid dianhydrides, kinetics of)  
 RN 13080-88-1 CAPIUS  
 CN Benzenamine, 4,4'-[oxybis(4,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)

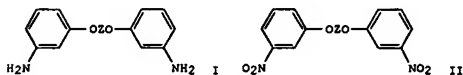


L42 ANSWER 146 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB The dependencies of the modulus (E) of elasticity on temperature (T) and time  
 (v) were determined for 30 oriented polymers, 27 of which were polyimide fibers; and the formula  $E = E_0[1 - (kT/W_0)\ln(v/v_0)]$ , where  $E_0$  is E at  $T = 0$  K, k is the Boltzmann constant,  $W_0$  is the activation energy of E relaxation, and  $v_0$  is a constant, was proposed based on the data obtained. The  $v_0$  in this formula varied from .apprx.10-12 to .apprx.10-14 s, and the  $W_0$  was practically equal in value to the activation energy of fracture as determined from the Zhurkov equation linking temperature-time conditions with breaking strength. This suggested that the nature of temperature-time dependencies of E and breaking strength are the same.  
 ACCESSION NUMBER: 1987:19804 CAPLUS  
 DOCUMENT NUMBER: 106:19804  
 TITLE: Temperature-time dependence of the modulus of elasticity of oriented polymers  
 AUTHOR(S): Bronnikov, S. V.; Vettegren, V. I.; Korzhavin, L. N.; Frenkel, S. Ya.  
 CORPORATE SOURCE: Inst. Vysokomol. Soedin., Leningrad, USSR  
 SOURCE: Vysokomolekulyarnye Soedineniya, Seriya A (1986), 28(9), 1963-70  
 CODEN: VYSAAP; ISSN: 0507-5475  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 IT 53938-98-0 53938-99-1  
 RL: USES (Uses)  
 (fiber, elasticity modulus relaxation and fracture of oriented, activation energies of)  
 RN 53938-98-0 CAPLUS  
 CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 53563-78-3  
 CHF C30 H24 N2 O4



CM 2  
 CRN 89-32-7  
 CHF C10 H2 O6

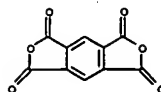
L42 ANSWER 147 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
 GI



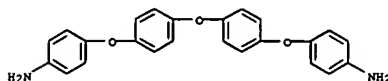
AB Title compds. I [Z = 1,4-phenylene, (4-C6H4)2Z1, Q, Q1, Q2: Z1 = bond, C1-10 hydrocarbonyl, C(CF3)2, CO, S, S(O), S(O)2, O; R, R1, R2 = H, Me] are prepared by condensation of 1,3-(O2N)2C6H4 with HO2OH in a dipolar solvent in the presence of a base, and reduction of the resulting bis(nitrophenoxy) derivs. II. The condensation may be accelerated by the presence of N(CH2CH2O(CH2CH2O)nR4)3 (n = 0, 1; R4 = alkyl). Thus, a mixture of (4-HOC6H4)2, 1,3-(O2N)2C6H4, and K2CO3 in DMF was heated at 145-150° for 16 h to give 99.5% II [Z = (4-C6H4)2] of 91.0% purity, which was reduced by N2H4-FeCl3 in MeOCH2CH2OH at 70-80° to give 85% I [Z = (4-C6H4)2] of 99.6% purity. ABS: use of N(CH2CH2O)2Me]3 accelerant in the condensation step gave 99.5% of 97.5%-pure nitro compound in only 2 h. Twelve other I were also prepared I may be used as monomers for high temperature-stable polymers (no data).  
 ACCESSION NUMBER: 1986:608599 CAPLUS  
 DOCUMENT NUMBER: 105:208599  
 TITLE: Bis(3-aminophenoxy) aromatics  
 INVENTOR(S): Yoshikawa, Yukihiro; Yamaguchi, Keizaburo; Sugimoto, Kenichi; Tanabe, Yoshimitsu; Yamaguchi, Akihiro  
 PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Inc., Japan  
 SOURCE: Eur. Pat. Appl., 47 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 192480	A1	19860827	EP 1986-301210	19860220
EP 192480	B1	19941123		
R: CH, DE, FR, GB, IT, LI, NL				
JP 61194055	A2	19860828	JP 1985-32568	19850222
JP 06000727	B4	19940105	JP 1985-113237	19850528
JP 61271259	A2	19861201	JP 1985-140408	19850628
JP 06053710	B4	19940720	JP 1985-183039	19850822
JP 62004253	A2	19870110	JP 1985-203557	19850917
JP 06000728	B4	19940105	JP 1985-210266	19850925
JP 62045563	A2	19870227	JP 1985-289334	19851224
JP 07010814	B4	19950208		
JP 62063551	A2	19870320		
JP 06000729	B4	19940105		
JP 62070347	A2	19870331		
JP 06037444	B4	19940518		
JP 62148455	A2	19870702		
JP 06037445	B4	19940518		

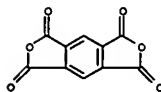
L42 ANSWER 146 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 53938-99-1 CAPLUS  
 CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 13080-88-1  
 CHF C24 H20 N2 O3



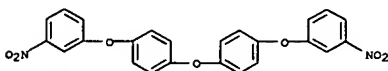
CM 2  
 CRN 89-32-7  
 CHF C10 H2 O6



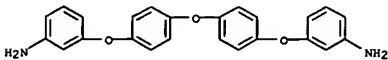
L42 ANSWER 147 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)  
 AU 8653785 A1 19860904 AU 1986-53785 19860220  
 AU 566103 B2 19871008  
 CA 1256451 A1 19890627 CA 1986-502460 19860221  
 US 5077436 A 19911231 US 1986-831547 19860221  
 JP 1985-32568 A 19850222

PRIORITY APPLN. INFO.:  
 JP 1985-113237 A 19850528  
 JP 1985-140408 A 19850628  
 JP 1985-183039 A 19850822  
 JP 1985-203557 A 19850917  
 JP 1985-210266 A 19850925  
 JP 1985-289334 A 19851224

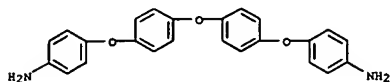
OTHER SOURCE(S): CASREACT 105:208599  
 IT 105113-04-0P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and reduction of)  
 RN 105113-04-0 CAPLUS  
 CN Benzene, 1,1'-oxybis[4-(3-nitrophenoxy)]- (9CI) (CA INDEX NAME)



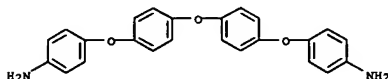
IT 58883-55-9P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of, via substitution reaction of dinitrobenzene)  
 RN 58883-55-9 CAPLUS  
 CN Benzenamine, 3,3'-(oxybis(4,1-phenyleneoxy))bis- (9CI) (CA INDEX NAME)



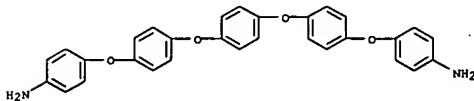
L42 ANSWER 148 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB Epoxy resins crosslinked with 4 new aromatic diamine hardeners and reinforced with graphite fibers gave composites that had improved moisture resistance, high hot wet glass temps., and good mech. properties compared to those of composites crosslinked with 4,4'-diaminodiphenyl sulfone (80-08-0). The new hardeners also had the potential for improving the Mode I interlaminar fracture toughness of the brittle composites.  
 ACCESSION NUMBER: 1986:461395 CAPIUS  
 DOCUMENT NUMBER: 105:61395  
 TITLE: Tetraglycidyl epoxy resins and graphite fiber composites cured with flexibilized aromatic diamines  
 AUTHOR(S): Delvigs, Peter  
 CORPORATE SOURCE: Lewis Res. Cent., Natl. Aeronaut. Space Adm., Cleveland, OH, 44135, USA  
 SOURCE: Polymer Composites (1986), 7(2), 101-5  
 CODEN: PCOMDI; ISSN: 0272-8397  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 13080-88-1  
 RL: MQA (Modifier or additive use); USES (Uses) (crosslinking agents, for epoxy resins, preparation of)  
 RN 13080-88-1 CAPIUS  
 CN Benzenamine, 4,4'-[oxybis(4,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)



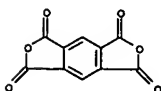
L42 ANSWER 149 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB The temperature-time dependence of viscous and viscoelastic properties of 4,4'-(m-phenylenedioxy)diphthalic anhydride-4,4'-[sulfonylbis(p-phenyleneoxy)]dianiline copolymer (I) [74951-99-8] were studied. The rheol. properties of I at 290-350° and 10-2-3 s-1 shear rates, and thermomech. properties (tensile strength, elastic modulus, softening temperature, and glass transition temperature) were determined. Optimal melt viscosity at <320° was attained for I with 1.03:1 dianhydride-diamine ratio. The viscosity increased at >320° due to crosslinking.  
 ACCESSION NUMBER: 1986:461214 CAPIUS  
 DOCUMENT NUMBER: 105:61214  
 TITLE: Viscous and viscoelastic properties of molten polyimides  
 AUTHOR(S): Koton, M. M.; Bolotnikova, L. S.; Svetlichnyi, I. F.; Davydova, I. F.; Kiselev, B. A.; Kudryavtsev, V. V.; Mnatsakanov, S. S.; Panov, Yu. N.; Perov, B. V.; Frenkel, S. Ya.  
 CORPORATE SOURCE: USSR  
 SOURCE: Plasticheskie Massy (1986), (4), 11-13  
 CODEN: PIMSAI; ISSN: 0554-2901  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 IT 13080-88-1D, polyimides  
 RL: PRP (Properties) (viscous and viscoelastic properties of, temperature-time dependence of)  
 RN 13080-88-1 CAPIUS  
 CN Benzenamine, 4,4'-[oxybis(4,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)



L42 ANSWER 150 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB Crystallite size along the chain axis of oriented crystalline polymers such as polyamides and polyimides was greater than the large lattice spacing, as determined by small- and wide-angle x-ray diffraction. This discrepancy, as well as dependence of the widening of meridional reflections on the order of reflection, was attributed to the coherence between neighboring crystallites in polymer microfibrils. Diffraction calcns. confirmed this attribution.  
 ACCESSION NUMBER: 1986:461179 CAPIUS  
 DOCUMENT NUMBER: 105:61179  
 TITLE: Diffraction of x-rays on the linear system of coherently arranged crystallites in polymer microfibril  
 AUTHOR(S): Azriel, A. E.; Vasil'ev, V. A.; Kazaryan, L. G.  
 CORPORATE SOURCE: Nauchno-Proizvod. Ob'edin. "Plastmassy", Moscow, USSR  
 SOURCE: Vysokomolekulyarnye Soedineniya, Seriya A (1986), 28(4), 810-16, 1 plate  
 CODEN: VYSAAF; ISSN: 0507-5475  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 IT 53938-98-0  
 RL: PRP (Properties) (crystallite size of oriented, fibrillar morphol. in relation to)  
 RN 53938-98-0 CAPIUS  
 CH 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-(1,4-phenylenebis(oxy-4,1-phenyleneoxy))bis(benzenamine) (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 53563-78-3  
 CHF C30 H24 N2 O4

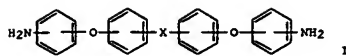


CM 2  
 CRN 89-32-7  
 CHF C10 H2 O6



L42 ANSWER 150 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)





AB A method for passivating a p-n junction of a semiconductor device (e.g., thyristor) involves the following steps: (1) carrying out the reaction between an organic acid dianhydride and I (X = O, SO<sub>2</sub>, CH<sub>2</sub>, C(Me)<sub>2</sub>, or CO<sub>2</sub>) 5-95 mol% to prepare a polyimide silicone resin; (2) purifying the resin by a reppn. method; (3) coating the exposed portions of the p-n junction with a varnish containing the purified resin; and (4) heat treating at 100-300°.

ACCESSION NUMBER: 1986:416489 CAPLUS  
DOCUMENT NUMBER: 105:16489  
TITLE: Passivation of a semiconductor device  
INVENTOR(S): Yokoyama, Takashi; Suzuki, Hiroshi  
PATENT ASSIGNEE(S): Hitachi, Ltd., Japan  
SOURCE: Jpn. Tokkyo Koho, 7 pp.  
CODEN: JAKKAD  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 60058582	B4	19851220	JP 1977-142791	19771130
JP 54075988	A2	19790618		

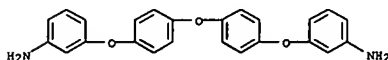
PRIORITY APPLN. INFO.: JP 1977-142791 A 19771130

IT 102772-38-3 102792-46-1  
RL: USES (Uses)

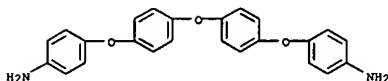
(semiconductor junctions passivated with)  
RN 102772-38-3 CAPLUS  
CN 1,3-isobenzofurandione, 5,5'-carbonylbis-, polymer with 3,3'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanedyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

CH 1

CRN 58883-55-9  
CMF C24 H20 N2 O3

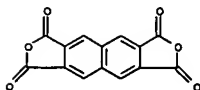


CH 2



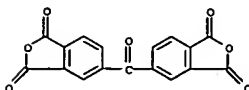
CH 3

CRN 3711-01-1  
CMF C14 H4 O6

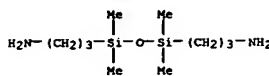


CH 4

CRN 2421-28-5  
CMF C17 H6 O7

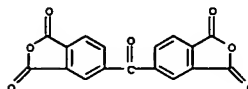


CRN 2469-55-8  
CMF C10 H28 N2 O Si2



CH 3

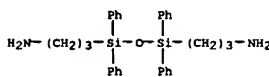
CRN 2421-28-5  
CMF C17 H6 O7



RN 102792-46-1 CAPLUS  
CN 1H,3H-Naphtho[2,3-c:6,7-c']difuran-1,3,6,8-tetrone, polymer with 5,5'-carbonylbis[1,3-isobenzofurandione], 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] and 3,3'-(1,1,3,3-tetraphenyl-1,3-disiloxanedyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

CH 1

CRN 78524-48-8  
CMF C30 H36 N2 O Si2



CH 2

CRN 13080-88-1  
CMF C24 H20 N2 O3

L42 ANSWER 152 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
AB Polyether-polyimides prepared from para-linked polycyclic tetracarboxylic acids or derivs. and para-linked polycyclic diamines have high crystallinity and solvent resistance. Thus, a 9:8.82:0.18 4,4'-bis(4-aminophenoxy)biphenyl-1,4-bis(3,4-dicarboxyphenoxy)benzene dianhydride-phthalic anhydride copolymer had glass temperature 230°, m.p. 364°, decomposition temperature 520° in N, and was insol. in N-methylpyrrolidone but soluble in m-cresol and o-chlorophenol.

ACCESSION NUMBER: 1986:407049 CAPLUS  
DOCUMENT NUMBER: 105:7049  
TITLE: Crystalline polyether-polyimides and polyamic acid precursors  
INVENTOR(S): Takekoshi, Tohru; Anderson, Patricia Pike  
PATENT ASSIGNEE(S): General Electric Co., USA  
SOURCE: Eur. Pat. Appl., 16 pp.  
CODEN: EPOXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 173882	A2	19860312	EP 1985-110020	19850808
EP 173882	A3	19880601		
EP 173882	B1	19901128		
R: DE, FR, GB, IT, NL				
US 4599396	A	19860708	US 1984-647286	19840904
CA 1241793	A1	19880906	CA 1985-485902	19850628
AU 8545282	A1	19860313	AU 1985-45282	19850723
AU 572320	B2	19880505		
JP 61083230	A2	19860426	JP 1985-193277	19850903

PRIORITY APPLN. INFO.: US 1984-647286 A 19840904

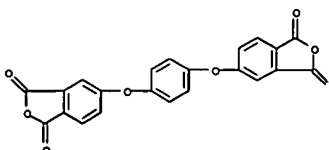
IT 102715-87-7P 102715-91-3P

RL: PREP (Preparation)  
(crystalline and solvent-resistant, manufacture of)

RN 102715-87-7 CAPLUS  
CN 1,3-isobenzofurandione, 5,5'-[1,4-phenylenebis(oxy)]bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CH 1

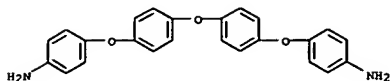
CRN 17828-53-4  
CMF C22 H10 O8



L42 ANSWER 152 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)

CM 2

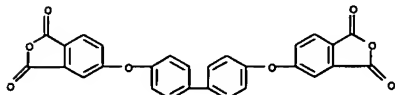
CRN 13080-88-1  
CMF C24 H20 N2 O3



RN 102715-91-3 CAPIUS  
CM 1,3-isobenzofurandione, 5,5'-[(1,1'-biphenyl)-4,4'-diylbis(oxy)]bis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

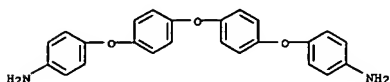
CM 1

CRN 26177-82-2  
CMF C28 H14 O8

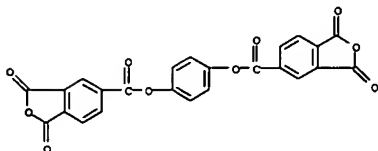


CM 2

CRN 13080-88-1  
CMF C24 H20 N2 O3



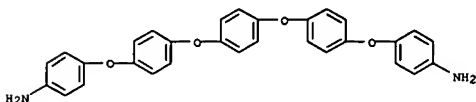
L42 ANSWER 153 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)



RN 53938-98-0 CAPIUS  
CM 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

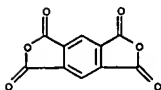
CM 1

CRN 53563-78-3  
CMF C30 H24 N2 O4



CM 2

CRN 89-32-7  
CMF C10 H2 O6



RN 53938-99-1 CAPIUS  
CM 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 13080-88-1  
CMF C24 H20 N2 O3

L42 ANSWER 153 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
AB IR spectroscopy and x-ray diffraction were used to study the structure of aromatic polyamic acids (PAA) in DMF solns. for the preparation of polypyromellitimides, polyester polyimides, polyamide polyimides, and polyester polyamide polyimides. Anomalies occurring in IR absorption

with increasing concentration and transition of the polymer into the condensed state were due to the formation of a mesomorphic structure which was previously detected by x-ray diffraction and calorimetric methods. The initial stages of intermol. ordering in PAA solns. were determined

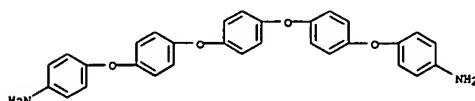
ACCESSION NUMBER: 1985:561044 CAPIUS  
DOCUMENT NUMBER: 103:161044  
TITLE: Study of ordering in the polyamic acid form of aromatic polymers containing imide rings  
AUTHOR(S): Mikhailova, N. V.; Baklagina, Yu. G.; Sidorovich, A. V.  
CORPORATE SOURCE: Inst. Vysokomol. Soedin., Leningrad, USSR  
SOURCE: Vysokomolekulyarnye Soedineniya, Seriya A (1985), 27(6), 1254-61  
CODEN: VYSAAF; ISSN: 0507-5475

DOCUMENT TYPE: Journal  
LANGUAGE: Russian  
IT 53563-79-4 53938-98-0 53938-99-1  
RL: FRP (Properties)  
(mol. ordering of, in solution, cyclization effect on)

RN 53563-79-4 CAPIUS  
CM 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

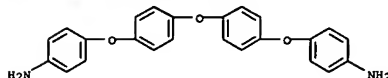
CRN 53563-78-3  
CMF C30 H24 N2 O4



CM 2

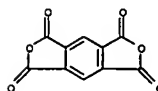
CRN 2770-49-2  
CMF C24 H10 O10

L42 ANSWER 153 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)



CM 2

CRN 89-32-7  
CMF C10 H2 O6

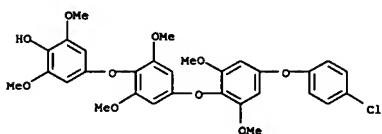


L42 ANSWER 154 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB Enzyme-catalyzed copolymerization of phenols with 1-5 Cl (4-chlorophenol [106-48-9]; 2,4- (120-83-2) and 2,6-dichlorophenol [87-65-0]; 4-bromo-2-chlorophenol [3964-56-5]; 2,3,6- [933-75-5] and 2,4,5-trichlorophenol [88-06-2]; 2,3,5,6-tetrachlorophenol [935-95-5]; and pentachlorophenol [87-86-5]) and syringic acid [530-57-4] was studied with an extracellular laccase [80498-15-3] of the fungus *Rhizoctonia praticola*. This reaction is of interest since it presents a model for explaining the incorporation of anthropogenic compds. into humic

substances. When the laccase was incubated together with the halogenated phenols and syringic acid, 2 types of hybrid products were found: phenols covalently bound to an orthoquinone product of syringic acid resulting in the formation of quinonoid oligomers, and phenols covalently bound to decarboxylated products of syringic acid resulting in the formation of phenolic oligomers. Mass spectra of hybrid oligomers gave typical Cl isotopic patterns which coincided with their resp. chlorophenol monomer. Thus, all hybrid products contained only 1 halogenated phenol mol. and no dehalogenation took place.

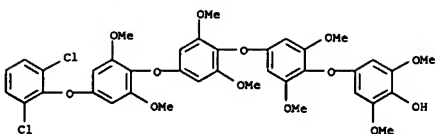
ACCESSION NUMBER: 1985:421659 CAPLUS  
 DOCUMENT NUMBER: 103:21659  
 TITLE: Copolymerization of halogenated phenols and syringic acid  
 AUTHOR(S): Bollag, Jean Marc; Liu, Shu Yen  
 CORPORATE SOURCE: Lab. Soil Microbiol., Pennsylvania State Univ., University Park, PA, 16802, USA  
 SOURCE: Pesticide Biochemistry and Physiology (1985), 23(2), 261-72  
 CODEN: PCBPBS; ISSN: 0048-3575

DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 103:21659  
 IT 96158-56-4 96158-57-5 96158-58-6  
 96158-59-7 96158-60-0 96158-64-4  
 96158-65-5 96158-66-6 96158-67-7  
 96158-70-2 96158-73-5 96158-74-6  
 96183-00-5 96857-30-6  
 RL: FORM (Formation, nonpreparative)  
 (formation of, from halophenol and syringic acid, laccase in)  
 RN 96158-56-4 CAPLUS  
 CN Phenol, 4-[4-[4-(4-chlorophenoxy)-2,6-dimethoxyphenoxy]-2,6-dimethoxyphenoxy]-2,6-dimethoxy- (9CI) (CA INDEX NAME)

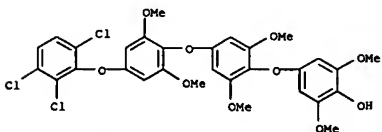


RN 96158-57-5 CAPLUS  
 CN Phenol, 4-[4-[4-(2,4-dichlorophenoxy)-2,6-dimethoxyphenoxy]-2,6-dimethoxyphenoxy]-2,6-dimethoxy- (9CI) (CA INDEX NAME)

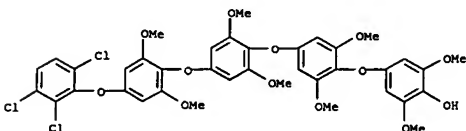
L42 ANSWER 154 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



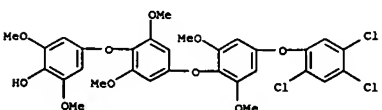
RN 96158-64-4 CAPLUS  
 CN Phenol, 4-[4-[4-(2,6-dimethoxy-4-(2,3,6-trichlorophenoxy)phenoxy)-2,6-dimethoxyphenoxy]-2,6-dimethoxyphenoxy]-2,6-dimethoxy- (9CI) (CA INDEX NAME)



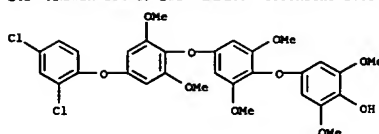
RN 96158-65-5 CAPLUS  
 CN Phenol, 4-[4-[4-(2,6-dimethoxy-4-(2,3,6-trichlorophenoxy)phenoxy)-2,6-dimethoxyphenoxy]-2,6-dimethoxyphenoxy]-2,6-dimethoxy- (9CI) (CA INDEX NAME)



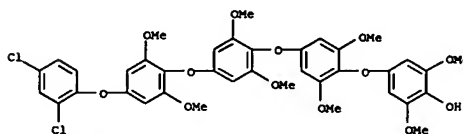
RN 96158-66-6 CAPLUS  
 CN Phenol, 4-[4-[4-(2,6-dimethoxy-4-(2,4,5-trichlorophenoxy)phenoxy)-2,6-dimethoxyphenoxy]-2,6-dimethoxyphenoxy]-2,6-dimethoxy- (9CI) (CA INDEX NAME)



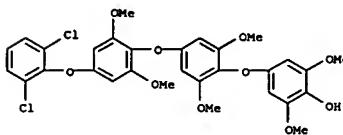
L42 ANSWER 154 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 96158-58-6 CAPLUS  
 CN Phenol, 4-[4-[4-(2,4-dichlorophenoxy)-2,6-dimethoxyphenoxy]-2,6-dimethoxyphenoxy]-2,6-dimethoxy- (9CI) (CA INDEX NAME)



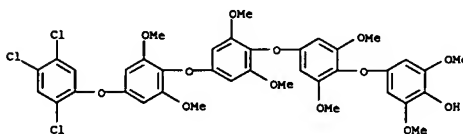
RN 96158-59-7 CAPLUS  
 CN Phenol, 4-[4-[4-(2,6-dichlorophenoxy)-2,6-dimethoxyphenoxy]-2,6-dimethoxyphenoxy]-2,6-dimethoxy- (9CI) (CA INDEX NAME)



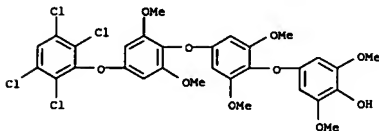
RN 96158-60-0 CAPLUS  
 CN Phenol, 4-[4-[4-(2,6-dichlorophenoxy)-2,6-dimethoxyphenoxy]-2,6-dimethoxyphenoxy]-2,6-dimethoxy- (9CI) (CA INDEX NAME)

L42 ANSWER 154 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

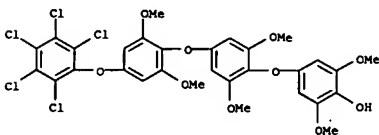
RN 96158-67-7 CAPLUS  
 CN Phenol, 4-[4-[4-(2,6-dimethoxy-4-(2,4,5-trichlorophenoxy)phenoxy)-2,6-dimethoxyphenoxy]-2,6-dimethoxyphenoxy]-2,6-dimethoxy- (9CI) (CA INDEX NAME)



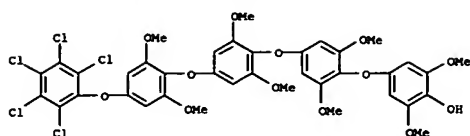
RN 96158-70-2 CAPLUS  
 CN Phenol, 4-[4-[4-(2,6-dimethoxy-4-(2,3,5,6-tetrachlorophenoxy)phenoxy)-2,6-dimethoxyphenoxy]-2,6-dimethoxyphenoxy]-2,6-dimethoxy- (9CI) (CA INDEX NAME)



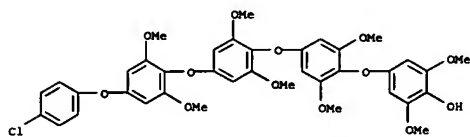
RN 96158-73-5 CAPLUS  
 CN Phenol, 4-[4-[4-(2,6-dimethoxy-4-(pentachlorophenoxy)phenoxy)-2,6-dimethoxyphenoxy]-2,6-dimethoxyphenoxy]-2,6-dimethoxy- (9CI) (CA INDEX NAME)



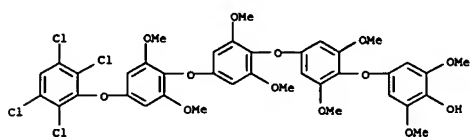
RN 96158-74-6 CAPLUS  
 CN Phenol, 4-[4-[4-(2,6-dimethoxy-4-(pentachlorophenoxy)phenoxy)-2,6-dimethoxyphenoxy]-2,6-dimethoxyphenoxy]-2,6-dimethoxy- (9CI) (CA INDEX NAME)



RN 96183-00-5 CAPIUS  
CN Phenol, 4-[4-[4-(4-chlorophenoxy)-2,6-dimethoxyphenoxy]-2,6-dimethoxyphenoxy]-2,6-dimethoxy- (9CI) (CA INDEX NAME)



RN 96857-30-6 CAPIUS  
CN Phenol, 4-[4-[4-[2,6-dimethoxy-4-(2,3,5,6-tetrachlorophenoxy)phenoxy]-2,6-dimethoxyphenoxy]-2,6-dimethoxyphenoxy]-2,6-dimethoxy- (9CI) (CA INDEX NAME)



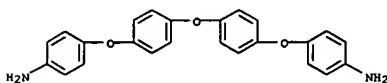
L42 ANSWER 156 OF 231 CAPIUS COPYRIGHT 2005 ACS ON STN  
AB Orientation layers for liquid crystal display devices are prepared by the thermal cyclization of polyhydrazidic-amidic acids prepared by the reaction of a diamine and dihydrazide with a tetracarboxylic acid anhydride. Thus, a solution containing isophthalic acid dihydrazide 0.095, p-phenylenediamine 0.005, pyromellitic acid dianhydride 0.1 mol, and N-methyl-2-pyrrolidone was stirred 3 h at 5° to give a polymer solution with 12% solids. This solution was thinned with N-methyl-2-pyrrolidone to give 7% solids and then printed by an offset printing press on the electrode plate of a liquid crystal display device followed by heating at 250° for 1 h to give orientation layers with a thickness of 1000, 2000, or 3000 Å thickness. When this plate was used in a liquid crystal display device, overall, the partially reflected image-pattern was not visible to the naked eye at a reference angle of 30°.

ACCESSION NUMBER: 1983:414034 CAPIUS  
DOCUMENT NUMBER: 99:14034  
TITLE: Orientation layers for liquid crystal display devices  
INVENTOR(S): Yokokura, Hisao; Kitamura, Teruo; Ito, Ren; Nakano, Fumio; Morishita, Hirotsada; Sato, Mikio; Kando, Yasuhiko  
PATENT ASSIGNEE(S): Hitachi, Ltd., Japan  
SOURCE: Ger. Offen., 50 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

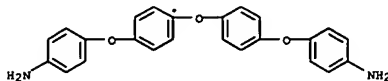
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3128393	A1	19830210	DE 1981-3128393	19810717
DE 3128393	C2	19830519		

PRIORITY APPL. INFO.: DE 1981-3128393 19810717

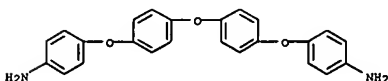
IT 13080-88-1D, polymers, cyclized  
RL: USES (Uses)  
(mol. orientation layers containing, for electrooptical display devices)  
RN 13080-88-1 CAPIUS  
CN Benzenamine, 4,4'-[oxybis(4,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)



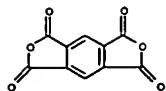
L42 ANSWER 155 OF 231 CAPIUS COPYRIGHT 2005 ACS ON STN  
AB Dissociation consts. pK1 and pK2 of 4,4'-diaminodiphenylmethane, 3,3'-dimethyl-4,4'-diaminodiphenylmethane, 4,4'-diaminodiphenyl ether, 4,4'-bis(4-aminophenoxy)diphenyl ether, and 4,4'-bis(4-aminophenoxy)diphenyl sulfone in acetone and Me Et ketone were determined by using electromotive force measurements with cells with glass electrode and by potentiometric titrations. All amines are weak bases. The effects of the structure of the diamine and of the nature of the solvent on acid-basic properties are discussed.  
ACCESSION NUMBER: 1984:162749 CAPIUS  
DOCUMENT NUMBER: 100:162749  
TITLE: Determination of thermodynamic dissociation constants in ketone media  
AUTHOR(S): Tanganov, B. B.; Shulunova, K. N.; Batlaev, K. E.; Mogonov, D. M.; Izyneev, A. A.  
CORPORATE SOURCE: Irkutsk. Gos. Univ., Irkutsk, USSR  
SOURCE: Deposited Doc. (1982), SPSTL 645 Khp-D82, 6 pp.  
Avail.: SPSTL  
DOCUMENT TYPE: Report  
LANGUAGE: Russian  
IT 13080-88-1  
RL: PEP (Physical, engineering or chemical process); PROC (Process) (ionization of, in ketones)  
RN 13080-88-1 CAPIUS  
CN Benzenamine, 4,4'-[oxybis(4,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)



L42 ANSWER 157 OF 231 CAPIUS COPYRIGHT 2005 ACS ON STN  
AB The thermal stability of aromatic polyimides of different structure, intramol. interaction energy, and chain rigidity was studied in Ar and air at 5°/min heating rate; the initial degradation temperature was determined by differential thermogravimetry and DTA. The thermal stability was determined by the weakest chemical bonds which were identical for all specimens regardless of their chemical nature. The thermal stability increased approx. 5% by increasing the chain rigidity. The initial degradation temperature was independent of the intramol. interaction energy and varied by 31° in Ar and 11° in air depending on chemical structure of the polyimides.  
ACCESSION NUMBER: 1983:161611 CAPIUS  
DOCUMENT NUMBER: 98:161611  
TITLE: Interrelation of chemical structure and thermal stability of polyimides  
AUTHOR(S): Prokopchuk, M. R.; Batura, L. N.  
CORPORATE SOURCE: Inst. Fiz.-Org. Khim., Minsk, USSR  
SOURCE: Vestsi Akademii Navuk BSSR, Seriya Khimichnykh Navuk (1983), (1), 85-9  
CODEN: VBSKAK; ISSN: 0002-3590  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian  
IT 53938-99-1  
RL: PRP (Properties)  
(thermal stability of)  
RN 53938-99-1 CAPIUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)  
CH 1  
CRN 13080-88-1  
CHF C24 H20 N2 O3



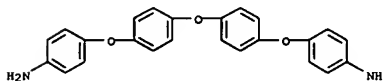
CH 2  
CRN 89-32-7  
CHF C10 H2 O6



142 ANSWER 158 OF 231 CAPLUS COPYRIGHT 2005 ACS ON STN  
 AB Diamines containing 1-20 mol% diaminosiloxanes and 80-99 mol% aromatic  
 diamines  
 react with tetracarboxylic acid dianhydrides to prepare polyamic acids  
 for  
 coating materials. Thus, 2,2-bis[4-(4-aminophenoxy)phenyl]propane  
 5.4190,  
 H<sub>2</sub>N(CH<sub>2</sub>)<sub>3</sub>SiMe<sub>2</sub>O<sub>2</sub>SiMe<sub>2</sub>(CH<sub>2</sub>)<sub>3</sub>NH<sub>2</sub> 0.3728, N-methyl-2-pyrrolidone 107.7, and  
 N-benzyl-2-pyrrolidone 5.7 g were stirred under N at <5°, mixed  
 with 6.6093 g pyromellitic dianhydride, stirred 3 h at the ice-bath  
 temperature  
 and 3 h at 25°, heated at 70° until the solution viscosity was  
 approx.1100 cP, filtered, coated on a Si wafer, dried, and cured to form  
 a  
 uniform coating free of pinholes.  
 ACCESSION NUMBER: 1983:145169 CAPLUS  
 DOCUMENT NUMBER: 98:145169  
 TITLE: Coating solutions for formation of thin films  
 PATENT ASSIGNEE(S): Hitachi, Ltd., Japan; Hitachi Chemical Co., Ltd.  
 SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
 CODEN: JKOKAK  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 57168943	A2	19821018	JP 1981-54409	19810413
PRIORITY APPLN. INFO.:			JP 1981-54409	19810413

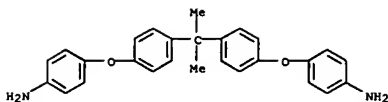
IT 85214-60-4 85214-61-5 85214-62-6  
RL: TEM (Technical or engineered material use); USES (Uses)  
(coatings, on silicon wafers)  
RN 85214-60-4 CAPIUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with  
4,4'-[1-methylethylidene]bis(4,1-phenyleneoxy)bis[benzenamine],  
4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] and 3,3'-(1,1,3,3-  
tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI) (CA INDEX NAME)  
CM 1  
CRN 13080-88-1  
CMF C24 H20 N2 O3



CM 2

CRN 13080-86-9

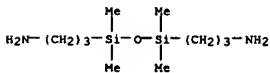
CMF C27 H26 N2 O2



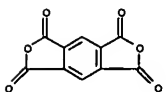
CM 3

CRN 2469-55-8

CMF C10' H28 N2 O Si2



CM 4  
CRN 89-32-7  
CMF C10 H2 O6



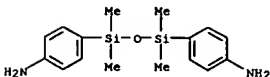
```

CRN  85214-61-5  CAPLUS
CN   1H, 3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with
CN   5,5'-carbonylbis[1,3-isobenzofurandione], 4,4'-[1-
CN   methylethylidene]bis(4,1-phenyleneoxy)bis(benzenamine),
CN   4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) and 4,4'-(1,1,3,3-
CN   tetramethyl-1,3-disiloxanediyl)bis(benzenamine) (9CI) (CA INDEX NAME)

CM   1

CRN  85214-57-9
CMF  C16 H24 N2 O Si2

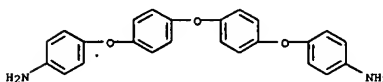
```



CM 2

CRN 13080-88-1

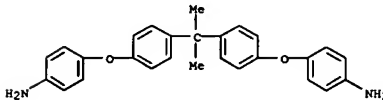
CMF C24 H20 N2 O3



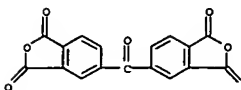
CM 3

CRN 13080-86-9

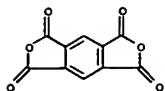
CMF C27 H26 N2 O2



CM 4  
CRN 2421-28-5  
CMF C17 H6 O7



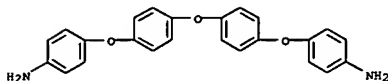
CM 5  
CRN 89-32-7  
CMF C10 H2 O6



RN 85214-62-6 CAPIUS  
 CN 1,3-isobenzofurandione, 5,5'-carbonylbis-, polymer with  
 4,4'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bis(benzenamine),  
 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) and 3,3'-[(1,1,3,3-  
 tetramethyl-1,3-disiloxanedyl)bis(1-propanamine)] (9CI) (CA INDEX NAME)

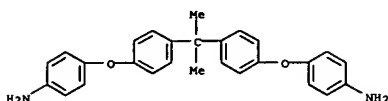
CH 1

CRN 13080-88-1  
 CMF C24 H20 N2 O3



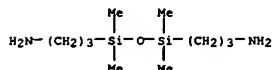
CH 2

CRN 13080-86-9  
 CMF C27 H26 N2 O2



CH 3

CRN 2469-55-8  
 CMF C10 H28 N2 O S12



L42 ANSWER 159 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB NMR was used to study mol. mobility at 77-623K in partially crystalline  
 aromatic polyimide fibers having a high degree of chain orientation in the  
 crystalline region. The mol. mobility was mainly due to the torsional vibration of  
 Ph

groups at 30-40° amplitude. The transition of the polymer from a  
 glassy to high elastic state was accompanied by the appearance of  
 segmental and rotational mobility.

ACCESSION NUMBER: 1983:108731 CAPIUS  
 DOCUMENT NUMBER: 98:108731  
 TITLE: NMR study of molecular mobility in polyimide fibers  
 of

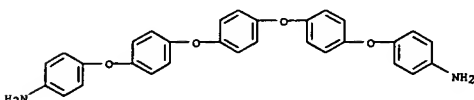
various chemical structure  
 AUTHOR(S): Goryainov, G. I.; Kol'tsov, A. I.  
 CORPORATE SOURCE: Inst. Vysokomol. Soedin., Leningrad, USSR  
 SOURCE: Vysokomolekulyarnye Soedineniya, Seriya B: Kratkie  
 Soobshcheniya (1982), 24(12), 910-13  
 CODEN: VYSBAI; ISSN: 0507-5483

DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 IT 53938-98-0 53938-99-1  
 RL: USES (Uses)  
 (fibers, mol. mobility of, temperature and structure effect on, NMR  
 spectra in relation to)

RN 53938-98-0 CAPIUS  
 CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with  
 4,4'-[(1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA  
 INDEX NAME)

CH 1

CRN 53563-78-3  
 CMF C30 H24 N2 O4

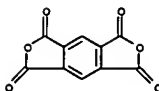
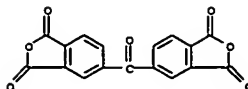


CH 2

CRN 89-32-7  
 CMF C10 H2 O6

CH 4

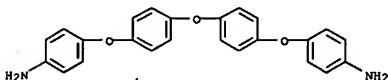
CRN 2421-28-5  
 CMF C17 H6 O7



RN 53938-99-1 CAPIUS  
 CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with  
 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

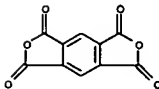
CH 1

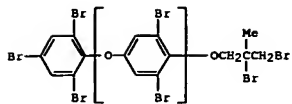
CRN 13080-88-1  
 CMF C24 H20 N2 O3



CH 2

CRN 89-32-7  
 CMF C10 H2 O6





AB Poly(p-phenylene oxides) of d.p. 2-101, bearing 21 halogen substituent on each ring, optionally having addnl. Cl-3 alkyl substituents, and terminated with an alkoxy, haloalkoxy, hydroxyalkoxy, haloalkoxyalkoxy, polyoxyalkylenoxy, alkenyloxy, haloalkenyloxy, aralkoxy, haloaralkoxy, acyloxy, haloacyloxy, benzoyloxy, halobenzoyloxy, acryloyloxy, methacryloyloxy, or epoxyalkoxy group are useful as flame retardants for organic polymers. Thus, high-impact polystyrene

[9003-53-6]  
100, I [84372-96-3] 5, and Sb2O3 2 parts were compounded 6 min at 200° and formed into a test specimen with flame-resistance rating [UL 94 (0.125-m)] V-2 (self-extinguishing time average 5.2 s, total glow time 0 s, and dripping) and showing no change during 12-h irradiation in a fadeometer, compared with burning (no flame resistance) and yellowing, resp., when I was replaced by decabromodiphenyl ether.

ACCESSION NUMBER: 1983:55078 CAPLUS  
DOCUMENT NUMBER: 98:55078  
TITLE: Flame retardants  
PATENT ASSIGNEE(S): Daiichi Seiyaku Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
CODEN: JIQQAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 57126829	A2	19820806	JP 1981-13553	19810130
JP 63008977	B4	19880225		

PRIORITY APPLN. INFO.: JP 1981-13553 19810130

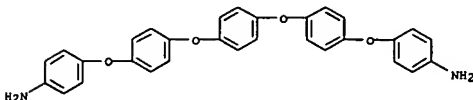
IT 84372-96-3  
RL: PEP (Physical, engineering or chemical process); PROC (Process) (fireproofing agents, for polymers)  
RN 84372-96-3 CAPLUS  
CN Benzene, 1,3-dibromo-2-[3,5-dibromo-4-[3,5-dibromo-4-(2,3-dibromo-2-methylpropoxy)phenoxy]phenoxy]-5-(2,4,6-tribromophenoxy)- (9CI) (CA INDEX NAME)

L42 ANSWER 161 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
AB The phonon theory-based equation of durability relating the activation energy of mech. degradation and structure-sensitive coefficient of the Zhurkov's long-term strength equation to the Young's modulus and the Grueneisen constant was exptl. verified for oriented fibers from aromatic

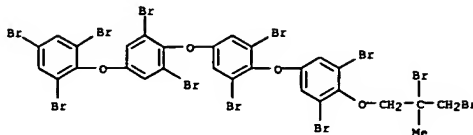
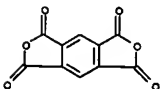
polyamides, polyamide-polyhydrazides, linear aromatic polyimides, and polyacrylonitrile.  
Degradation-causing heat fluctuations were determined  
ACCESSION NUMBER: 1982:617857 CAPLUS  
DOCUMENT NUMBER: 97:217857  
TITLE: Relation between strength and elastic properties of polymers  
AUTHOR(S): Vettegren, V. I.; Kusaov, A. A.; Korzhavin, L. N.; Frenkel, S. Ya.  
CORPORATE SOURCE: Fiz.-Tekh. Inst. im. Ioffe, Leningrad, USSR  
SOURCE: Vysokomolekulyarnye Soedineniya, Seriya A (1982), 24(9), 1958-67  
CODEN: VYSAAF; ISSN: 0507-5475  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian

IT 53938-98-0 53938-99-1  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process) (fibers, mech. degradation of, elasticity in relation to)  
RN 53938-98-0 CAPLUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-(1,4-phenylenebis(oxy-4,1-phenyleneoxy))bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1  
CRN 53563-78-3  
CMF C30 H24 N2 O4

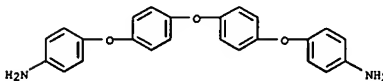


CM 2  
CRN 89-32-7  
CMF C10 H2 O6

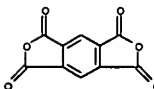


RN 53938-99-1 CAPLUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-(oxybis(4,1-phenyleneoxy))bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1  
CRN 13080-88-1  
CMF C24 H20 N2 O3



CM 2  
CRN 89-32-7  
CMF C10 H2 O6



L42 ANSWER 162 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN

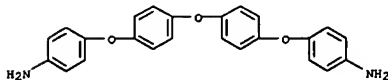
AB The existence of a linear relation between the energy (E) of intermol. interaction and the conformational parameters (K) was demonstrated for a series of highly oriented fibers from 10 aromatic polyimides differing in their chemical structure. E was calculated from exptl. determined initial activation energy of mech. degradation and overall activation energy of thermal degradation (P., 1980-1), and K represented a function of the identity period along the polymer chain and the control length of the chain fragment within the identity period (P., 1977). Polyimides consisting of aromatic units only, e.g., copolymers of pyromellitic dianhydride and 2,7-diaminofluorene, and having conformation of gently turned quasi-coils, had K  $\leq$  31 resulting in the most dense packing and high E (40-46 kcal/mol). Polyimides with O atoms in the diamine segments, e.g., 4,4'-oxybis(aniline)-pyromellitic dianhydride copolymer [25038-81-7], had a strongly coiled conformation, K in the range 7.6-10.9, and E in the range 3-11 kcal/mol. Polyimides with O or CO bonding the phthalic anhydride units occupied the intermediate position (K = 4.0-5.0, E = 33-34 kcal/mol).

ACCESSION NUMBER: 1982:617840 CAPLUS  
DOCUMENT NUMBER: 97:217840  
TITLE: Correlation of chemical structure, macromolecule geometry and intermolecular interactions in oriented polyarimides  
AUTHOR(S): Prokopchuk, N. R.  
CORPORATE SOURCE: Inst. Fiz.-Org. Khim., Minsk, USSR  
SOURCE: Doklady Akademii Nauk BSSR (1982), 26(9), 815-18  
CODEN: DBLRAC; ISSN: 0002-354X  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian  
IT 53938-99-1  
RL: USES (Uses)  
(fiber, chemical structure, intermol. interaction and macromol. geometry correlation of oriented)

RN 53938-99-1 CAPLUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 13080-88-1  
CMF C24 H20 N2 O3



CM 2

CRN 89-32-7

L42 ANSWER 163 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN

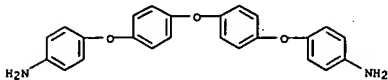
AB Correlations are established between energy (E) of mol. interactions and mech. properties of fully drawn polyimide fibers. The tensile strength increased from 39 to 210 kg/mm<sup>2</sup> as E increased from 8 to 46 kcal/mol, according to an empirical equation. Similar equations were derived for Young's modulus, elongation at break, and d.

ACCESSION NUMBER: 1982:583837 CAPLUS  
DOCUMENT NUMBER: 97:183837  
TITLE: Correlation of intermolecular interaction energy and mechanical properties of oriented polyimides  
AUTHOR(S): Prokopchuk, N. R.  
CORPORATE SOURCE: Inst. Fiz.-Org. Khim., Minsk, USSR  
SOURCE: Vestsi Akademii Navuk BSSR, Seryya Fizika-Tekhnichnykh Navuk (1982), (3), 30-6  
CODEN: VABFAP; ISSN: 0002-3566  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian  
IT 83448-15-1  
RL: USES (Uses)  
(fiber, interaction energy of, properties in relation to)

RN 83448-15-1 CAPLUS  
CN 1,2,4,5-Benzenetetracarboxylic acid, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

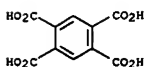
CM 1

CRN 13080-88-1  
CMF C24 H20 N2 O3



CM 2

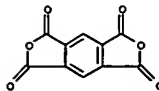
CRN 89-05-4  
CMF C10 H6 O8



L42 ANSWER 162 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN

CMF C10 H2 O6

(Continued)



L42 ANSWER 164 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN

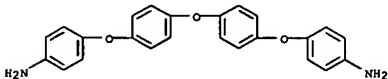
AB A quant. correlation was found between the glass transition temperature (T<sub>g</sub>) and m.p., and between the chain rigidity [expressed as equivalent rigidity (1-f)] and intermol. interaction energy (E<sub>ii</sub>) for 10 aromatic polyimides with different chain rigidities. Rigid-chain polyimides [(1-f) = 0.67-0.75] exhibited E<sub>ii</sub> approx. 33-46 kcal/mol and T<sub>g</sub> close to m.p. Flexible polyimides [(1-f) = 0.34-0.67] had E<sub>ii</sub> approx. 8-11 kcal/mol and T<sub>g</sub> < m.p. T<sub>g</sub> of the samples was more affected by E<sub>ii</sub> and (1-f) than was their m.p.

ACCESSION NUMBER: 1982:563781 CAPLUS  
DOCUMENT NUMBER: 97:163781  
TITLE: Correlation of intermolecular interaction energy and macromolecule rigidity with the glass transition temperature and melting point of poly(aryl imide)s  
AUTHOR(S): Prokopchuk, N. R.  
CORPORATE SOURCE: Inst. Fiz.-Org. Khim., Minsk, USSR  
SOURCE: Doklady Akademii Nauk BSSR (1982), 26(8), 723-6  
CODEN: DBLRAC; ISSN: 0002-354X  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian  
IT 83448-15-1 83448-16-2  
RL: FRP (Properties)  
(glass transition temperature and m.p. of, intermol. interaction energy and chain rigidity in relation to)

RN 83448-15-1 CAPLUS  
CN 1,2,4,5-Benzenetetracarboxylic acid, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

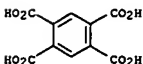
CM 1

CRN 13080-88-1  
CMF C24 H20 N2 O3



CM 2

CRN 89-05-4  
CMF C10 H6 O8

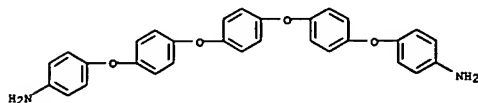


RN 83448-16-2 CAPLUS

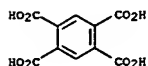


L42 ANSWER 164 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)  
 CN 1,2,4,5-Benzenetetracarboxylic acid, polymer with 4,4'-(1,4-phenylenebis(oxy-4,1-phenyleneoxy))bis(benzenamine) (9CI) (CA INDEX NAME)

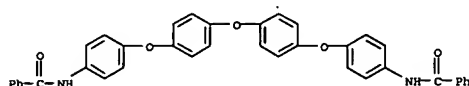
CH 1  
 CRN 53563-78-3  
 CHF C30 H24 N2 O4



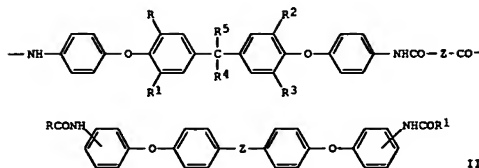
CH 2  
 CRN 89-05-4  
 CHF C10 H6 O8



L42 ANSWER 165 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)  
 (arom. polyamide-polyethers contg., moldable at low temp.)  
 RN 83048-50-4 CAPIUS  
 CN Benzamide, N,N'-[oxybis(4,1-phenyleneoxy-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



L42 ANSWER 165 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 GI



AB Poly(ether amides) having I (R, R1, R2, R3 = H, lower alkyl, lower alkoxy, Cl, Br; R4, R5 = H, Me, Et, CF3, CCl3; Z = p-phenylene, m-phenylene, oxydiphenylene, sulfonyldiphenylene, biphenylene, naphthylene) as a repeating unit (100 parts) and 0.5-20 parts amide compds. II (R, R1 = Cl-20 alkyl or aryl; Z = CH2, CMe2, O, S, SO2, CO) are blended to give compns. having low melt viscosity and moldability at low temps. Thus, a mixture of a 10% cyclohexane solution of 1:1 terephthaloyl dichloride-isophthaloyl dichloride and a 20% cyclohexane solution of 2,2-bis[4-(4-aminophenoxy)phenyl]propane was polymerized in the presence of 10% aqueous NaOH to provide a I (R-R6 = H; Z = m-C6H4, m-C6H4) [62532-20-1] having reduced viscosity 0.94 dL/g (0.2 g/dL, DMF). A mixture of the I (100 parts) and 10 parts II (R = R1 = Ph; amide groups para; Z = CMe2) [83048-51-5] was extruded at 300-320° and pelletized. The pellets were blow-molded at 330° and 1100 kg/cm2 to give samples having tensile strength 970 kg/m2, elongation 25%, impact strength 15.0 kg-cm/cm2, and heat-distortion temperature 170°, compared with 380° and 1500 kg/cm2, 940 kg/cm2, 124, 12.0 kg-cm/cm2, and 185°, resp., without the II.

ACCESSION NUMBER: 1982:545725 CAPIUS  
 DOCUMENT NUMBER: 97:145725  
 TITLE: Aromatic polyetheramide resin composition  
 PATENT ASSIGNEE(S): Hitachi Chemical Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JIOOAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

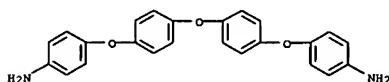
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 57057717	A2	19820407	JP 1980-133218	19800924
JP 58036017	B4	19830806		

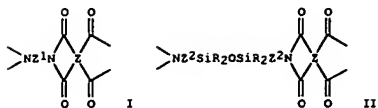
PRIORITY APPLN. INFO.: JP 1980-133218 19800924

IT 83048-50-4  
 RL: USES (Uses)

L42 ANSWER 166 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB An evaluation of the effect of the chemical constitution of the diamines and dianhydrides on the acylation rate constant and the isomer composition of the corresponding polyamic acid indicated that because the charge transport energy depends on the chemical constitution, the parameter  $\epsilon_0$ , the energy of the upper occupied shell, and the parameters  $\epsilon_{uf}$ , the energy of the lower free shell, and  $f_r$ , the limiting d. of electrons in the CO carbon atom, can be used as an index of the reactivity of amines and aromatic anhydrides, resp. The relation between the electron affinity of the dianhydrides and the ionization potential of the diamines and the reactivity of the compds. is confirmed.

ACCESSION NUMBER: 1982:52743 CAPIUS  
 DOCUMENT NUMBER: 96:52743  
 TITLE: Study of the reactivity of anhydride and amino groups in polyacylation of aromatic diamines with tetracarboxylic acid anhydrides  
 AUTHOR(S): Kudryavtsev, V. V.; Koton, M. M.; Svetlichnyi, V. M.; Zubkov, V. A.  
 CORPORATE SOURCE: Inst. High Mol. Comb., Leningrad, USSR  
 SOURCE: Plaste und Kautschuk (1981), 28(11), 601-6  
 CODEN: PLKAM; ISSN: 0048-4350  
 DOCUMENT TYPE: Journal  
 LANGUAGE: German  
 IT 13080-88-1  
 RL: PRP (Properties)  
 (ionization potential of, rate of polyacylation by dianhydrides in relation to)  
 RN 13080-88-1 CAPIUS  
 CN Benzenamine, 4,4'-[oxybis(4,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)





AB Mol. orientation-controlling films for liquid crystal display devices are prepared by using a polyimide-siloxane copolymer having structural units of

the formulas I and II (Z = tetracarboxylic dianhydride moiety; Z1 = C6H4O-p-C6H4Z3-p-C6H4OC6H4; Z2 = alkylene, phenylene, alkylphenylene; R = alkyl, aryl; Z3 = O, CH2, SO2, S, CO). Thus, 4,4'-bis(m-aminophenoxy)diphenyl sulfone 95, H2N(CH2)3SiPh2OSiPh2(CH2)3NH2 5, and benzophenone-3,3',4,4'-tetracarboxylic dianhydride 100 mol-parts were copolymd. in N-methyl-2-pyrrolidone to give a 15% copolymer solution

whose viscosity at 25° was 10,000 cP. Electrode plates were then coated with the solution, heated at 250°, and the polymer surface was rubbed to give electrode plates for display cells. The display devices prepared by

using the electrode plates exhibited an excellent moisture resistance.

ACCESSION NUMBER: 1981:578696 CAPIUS  
DOCUMENT NUMBER: 95:178696  
TITLE: Liquid crystal display devices  
PATENT ASSIGNEE(S): Hitachi, Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
CODEN: JQXXAF

DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 56036624	A2	19810409	JP 1979-111673	19790903
JP 59049565	B4	19841204		

PRIORITY APPLN. INFO.: JP 1979-111673 A 19790903

IT 79497-22-6

RL: USES (Uses)  
(mol. orientation controlling films of, for liquid crystal display devices)

RN 79497-22-6 CAPIUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 5,5'-carbonylbis[1,3-isobenzofurandione], 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] and 4,4'-(1,1,3,3-tetraphenyl-1,3-disiloxanedyl)bis[benzenamine] (9CI) (CA INDEX NAME)

CH 1

CRN 58293-13-3

CMF C36 H32 N2 O S12

L42 ANSWER 168 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN

AB In fabricating a semiconductor device (e.g., a thyristor or p-n-p transistor) by covering at least the exposed portion of a p-n junction(s) with a silicone resin which can be hardened by using an organic metal

ester catalyst and hardening in presence of H2O, a polyimide resin powder is mixed with the silicone resin to suppress increase of leakage current caused by the catalyst.

ACCESSION NUMBER: 1981:525020 CAPIUS  
DOCUMENT NUMBER: 95:125020  
TITLE: Semiconductor device  
PATENT ASSIGNEE(S): Hitachi, Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
CODEN: JQXXAF

DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 56040249	A2	19810416	JP 1979-116180	19790912
JP 61054248	B4	19861121		

PRIORITY APPLN. INFO.: JP 1979-116180 A 19790912

IT 53938-99-1 78992-90-2

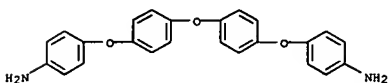
RL: USES (Uses)  
(semiconductor junction passivation by silicon and)

RN 53938-99-1 CAPIUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CH 1

CRN 13080-88-1

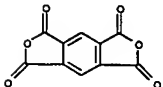
CMF C24 H20 N2 O3



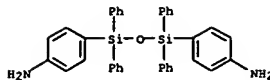
CH 2

CRN 89-32-7

CMF C10 H2 O6



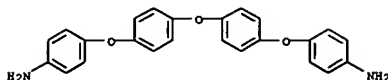
L42 ANSWER 167 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)



CH 2

CRN 13080-88-1

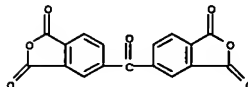
CMF C24 H20 N2 O3



CH 3

CRN 2421-28-5

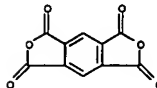
CMF C17 H6 O7



CH 4

CRN 89-32-7

CMF C10 H2 O6



L42 ANSWER 168 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)

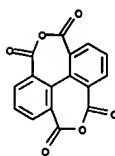
RN 78992-90-2 CAPIUS

CN 4H,6H-[2]Benzoxepino[6,5,4-def][2]benzoxepin-4,6,10,12-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CH 1

CRN 24821-26-9

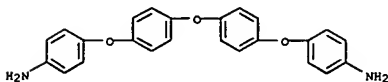
CMF C16 H6 O6

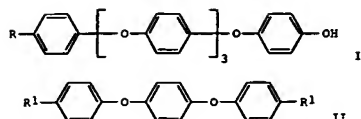


CH 2

CRN 13080-88-1

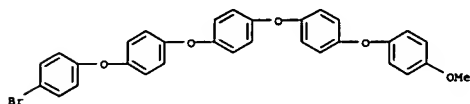
CMF C24 H20 N2 O3



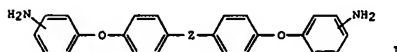


AB Tetraethers I (R = OH, Br) were prepared The O-arylation of 4-MeOC6H4OH  
by 1,4-Br2C6H4 and subsequent demethylation gave II (R1 = OH). The latter  
reacted with NaOH and 4-BrC6H4OMe, and the product was demethylated to  
yield I (R = OH). II (R1 = Br) condensed with 4-(MeOC6H4O)C6H4ONa, and  
the product was demethylated to give I (R = Br).

ACCESSION NUMBER: 1981:480345 CAPLUS  
DOCUMENT NUMBER: 95:80345  
TITLE: Polyethers. 2. Preparation of *o,o'*-  
disubstituted poly(aryl ethers)  
AUTHOR(S): Tashiro, Masashi; Yoshiya, Haruo; Fukata, Gouki  
CORPORATE SOURCE: Res. Inst. Ind. Sci., Kyushu Univ., Fukuoka, 812,  
Japan  
SOURCE: Organic Preparations and Procedures International  
(1981), 13(2), 87-92  
CODEN: OPPIAK; ISSN: 0030-4948  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
IT 78563-44-7P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and demethylation of)  
RN 78563-44-7 CAPLUS  
CN Benzene, 1-[4-(4-bromophenoxy)phenoxy]-4-[4-(4-methoxyphenoxy)phenoxy]-  
(9CI) (CA INDEX NAME)



IT 78563-46-9P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)  
RN 78563-46-9 CAPLUS  
CN Phenol, 4-[4-[4-(4-bromophenoxy)phenoxy]phenoxy]phenoxy]- (9CI) (CA  
INDEX NAME)



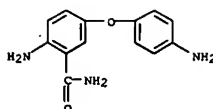
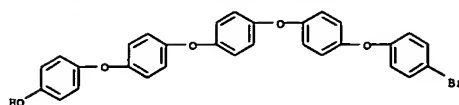
AB The mol. orientation-controlling films of liquid crystal display devices  
are prepared by using a thermal cyclization product of a condensation  
polymerization product of I (Z = SO2, O, CO, CH2, S), 4,4'-diamino-3-carbamoyldiphenyl  
ether, and a tetracarboxylic dianhydride. Thus, a 4,4'-bis(m-  
aminophenoxy)diphenyl sulfone-4,4'-diamino-3-carbamoyldiphenyl  
ether-3,3',4,4'-benzophenonetetracarboxylic dianhydride copolymer  
solution was coated on transparent electrode plates and heated at 250°.  
Various types of liquid crystal comps. exhibited excellent mol.  
orientation in the display cells prepared by using the electrode plates.

ACCESSION NUMBER: 1981:471089 CAPLUS  
DOCUMENT NUMBER: 95:71089  
TITLE: Molecular orientation-controlling films for liquid  
crystal display devices  
PATENT ASSIGNEE(S): Hitachi, Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
CODEN: JJOXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

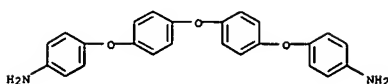
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 56009723	A2	19810131	JP 1979-84022	19790704
JP 60040607	B4	19850911		

PRIORITY APPLN. INFO.: JP 1979-84022 A 19790704

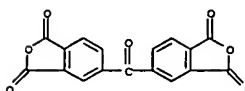
IT 78524-43-3  
RL: USES (Uses)  
(mol. orientation controlling films of, for liquid crystal display  
devices)  
RN 78524-43-3 CAPLUS  
CN Benzamide, 2-amino-5-(4-aminophenoxy)-, polymer with  
1H,3H-benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, 5,5'-carbonylbis[1,3-isobenzofurandione] and  
4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)  
CH 1  
CRN 40763-98-2  
CMF C13 H13 N3 O2



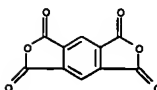
CH 2  
CRN 13080-88-1  
CMF C24 H20 N2 O3

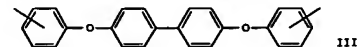
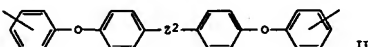
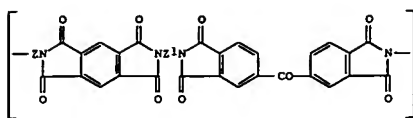


CH 3  
CRN 2421-28-5  
CMF C17 H6 O7



CH 4  
CRN 89-32-7  
CMF C10 H2 O6





AB Polyimides of the general formula I [Z = p-C6H4, p-C6H4C6H4-p, p-C6H4-p-C6H4C6H4-p; Z1 = II (Z2 = O, SO2, CH2, CO), III; n = p.d.] are used to form mol. orientation-controlling layers of liquid crystal display devices. The polyimides have good transparency and heat resistance. Thus, a liquid crystal display cell was constructed by using p-phenylenediamine-4,4'-bis(p-aminophenoxy)diphenyl ether-pyromellitic dianhydride-3,3',4,4'-benzophenonetetracarboxylic dianhydride copolymer as

the mol. orientation-controlling layer. Various types of liquid crystal compns. exhibited excellent mol. alignment in the cell.

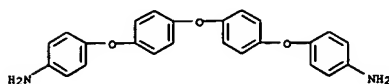
ACCESSION NUMBER: 1981:452750 CAPLUS  
DOCUMENT NUMBER: 95:52750  
TITLE: Molecular orientation-controlling films for liquid crystal display devices  
PATENT ASSIGNEE(S): Hitachi, Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
CODEN: JPOKAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 55166622	A2	19801225	JP 1979-11889	19790206
PRIORITY APPLN. INFO.:			JP 1979-11889	A 19790206

IT 77967-31-8  
RL: USES (Uses)  
(coatings, mol. orientation-controlling, for liquid crystal display devices)  
RN 77967-31-8 CAPLUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with

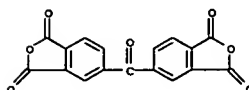
CH 1

CRN 13080-88-1  
CMF C24 H20 N2 O3



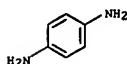
CH 2

CRN 2421-28-5  
CMF C17 H6 O7



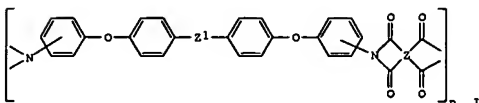
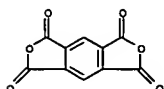
CH 3

CRN 106-50-3  
CMF C6 H8 N2



CH 4

CRN 89-32-7  
CMF C10 H2 O6



AB Liquid crystal display device mol. orientation-controlling films are made of a polyimide of the general formula I (Z = tetracarboxylic acid dianhydride moiety; Z1 = O, CO, CH2, S). The polyimide film does not exhibit degradation (by heat) during sealing of the display cell; hence the liquid crystal moles exhibit excellent orientation in the cell. Thus, a liquid crystal display cell was prepared by using 4,4'-bis(p-aminophenoxy)diphenyl ether-pyromellitic dianhydride-3,3',4,4'-benzophenonetetracarboxylic dianhydride copolymer as the mol. orientation-controlling film. Bisphenol-, Schiff's base-, ester-, as well as cyclohexane-type liquid crystals showed excellent orientation in the cell.

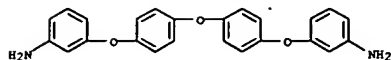
ACCESSION NUMBER: 1981:416016 CAPLUS  
DOCUMENT NUMBER: 95:16016  
TITLE: Liquid crystal display devices  
PATENT ASSIGNEE(S): Hitachi, Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
CODEN: JPOKAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 55163513	A2	19801219	JP 1979-70121	19790606
PRIORITY APPLN. INFO.:			JP 1979-70121	A 19790606

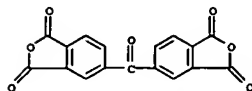
IT 58883-56-0 77945-52-9  
RL: USES (Uses)  
(mol. orientation controlling layers of, for liquid crystal display devices)  
RN 58883-56-0 CAPLUS  
CN 1,3-isobenzofurandione, 5,5'-carbonylbis-, polymer with 3,3'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CH 1

CRN 58883-55-9  
CMF C24 H20 N2 O3

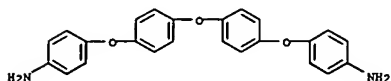


CM 2

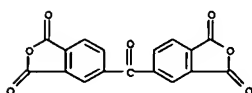
CRN 2421-28-5  
CMF C17 H6 O7

RN 77945-52-9 CAPLUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 5,5'-carbonylbis[1,3-isobenzofurandione] and 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 13080-88-1  
CMF C24 H20 N2 O3

CM 2

CRN 2421-28-5  
CMF C17 H6 O7

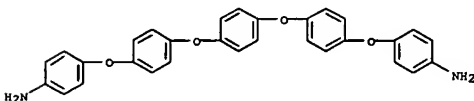
CM 3

L42 ANSWER 173 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
AB The glass transition temperature (Tg) was calculated for 48 aromatic polyimides using the equation of A. Askadskii and G. Slonimskii (1975) and a correlation was established between the Tg and chain flexibility and internal interactions. The critical chain flexibility was 0.67. Above this value, the Tg of the polyamides was determined wholly by intermol. interaction forces of adjacent chains.

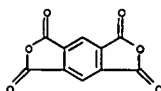
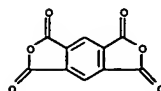
1981:175723 CAPLUS  
DOCUMENT NUMBER: 94:175723  
TITLE: Chemical structure and glass transition temperature of polyarimides  
AUTHOR(S): Korzhavin, L. N.; Bronnikov, S. V.; Frenkel, S. Ya.  
CORPORATE SOURCE: Inst. Vysokomol. Soedin., Leningrad, USSR  
SOURCE: Vysokomolekulyarnye Soedineniya, Seriya A (1981), 23(2), 366-74  
CODEN: VYSAAP; ISSN: 0507-5475

DOCUMENT TYPE: Journal  
LANGUAGE: Russian  
IT 53938-98-0 53938-99-1 77496-19-6  
77496-21-0 77496-23-2 77496-25-4  
77496-55-0 77496-56-1 77496-57-2  
77496-58-3 77496-59-4 77496-60-7  
RL: PRP (Properties)  
interaction (glass transition temperature of, chain flexibility and intermol. interaction in relation to)  
RN 53938-98-0 CAPLUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1  
CRN 53563-78-3  
CMF C30 H24 N2 O4

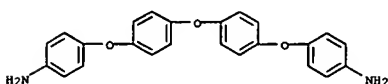


CM 2

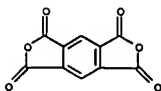
CRN 89-32-7  
CMF C10 H2 O6CRN 89-32-7  
CMF C10 H2 O6

RN 53938-99-1 CAPLUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 13080-88-1  
CMF C24 H20 N2 O3

CM 2

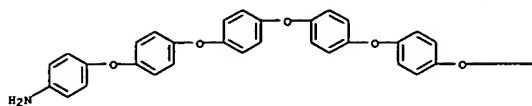
CRN 89-32-7  
CMF C10 H2 O6

RN 77496-19-6 CAPLUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

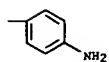
CM 1

CRN 77496-18-5  
CMF C36 H28 N2 O5

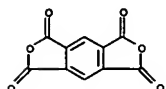
PAGE 1-A



PAGE 1-B



CM 2

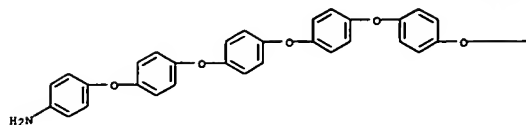
CRN 89-32-7  
CMF C10 H2 O6

RN 77496-21-0 CAPLUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy-4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

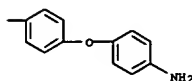
CM 1

CRN 77496-20-9  
CMF C42 H32 N2 O6

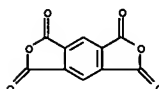
PAGE 1-A



PAGE 1-B



CM 2

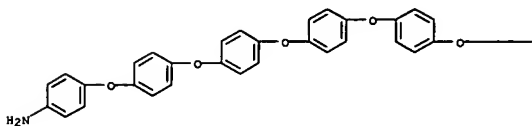
CRN 89-32-7  
CMF C10 H2 O6

RN 77496-23-2 CAPLUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy-4,1-phenyleneoxy-4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

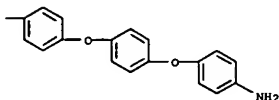
CM 1

CRN 77496-22-1  
CMF C48 H36 N2 O7

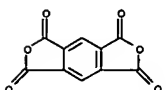
PAGE 1-A



PAGE 1-B



CM 2

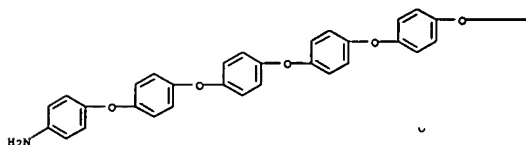
CRN 89-32-7  
CMF C10 H2 O6

RN 77496-25-4 CAPLUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy-4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

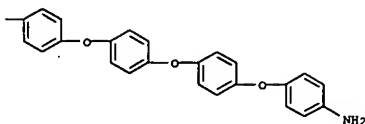
CM 1

CRN 77496-24-3  
CMF C54 H40 N2 O8

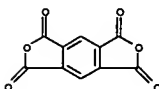
PAGE 1-A



PAGE 1-B



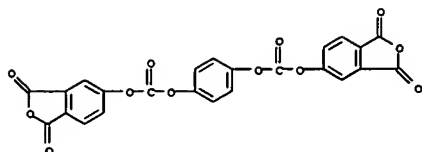
CM 2

CRN 89-32-7  
CMF C10 H2 O6

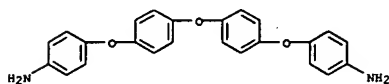
RN 77496-55-0 CAPLUS  
CN Carbonic acid, 1,4-phenylene bis(1,3-dihydro-1,3-dioxo-5-isobenzofuranyl) ester, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 77496-52-7  
CMF C24 H10 O12

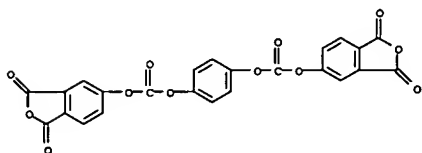


CM 2

CRN 13080-88-1  
CMF C24 H20 N2 O3

RN 77496-56-1 CAPLUS  
CN Carbonic acid, 1,4-phenylene bis(1,3-dihydro-1,3-dioxo-5-isobenzofuranyl) ester, polymer with 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

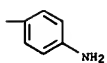
CM 1

CRN 77496-52-7  
CMF C24 H10 O12

CM 2

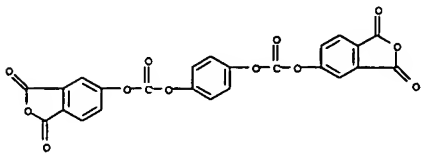
CRN 53563-78-3  
CMF C30 H24 N2 O4

PAGE 1-B

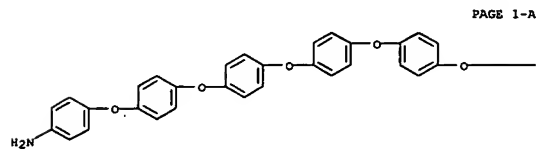


RN 77496-58-3 CAPLUS  
CN Carbonic acid, 1,4-phenylene bis(1,3-dihydro-1,3-dioxo-5-isobenzofuranyl) ester, polymer with 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

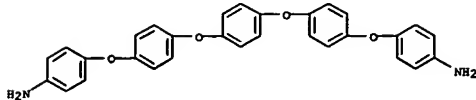
CM 1

CRN 77496-52-7  
CMF C24 H10 O12

CM 2

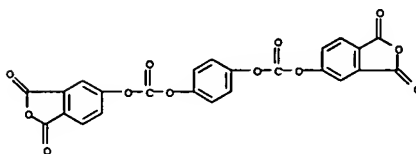
CRN 77496-20-9  
CMF C42 H32 N2 O6

PAGE 1-A

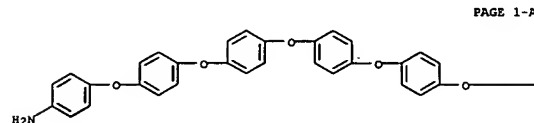


RN 77496-57-2 CAPLUS  
CN Carbonic acid, 1,4-phenylene bis(1,3-dihydro-1,3-dioxo-5-isobenzofuranyl) ester, polymer with 4,4'-[oxybis(4,1-phenyleneoxy-4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

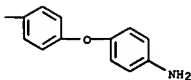
CRN 77496-52-7  
CMF C24 H10 O12

CM 2

CRN 77496-18-5  
CMF C36 H28 N2 O5

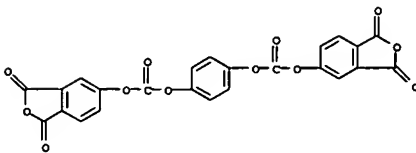
PAGE 1-A

PAGE 1-B

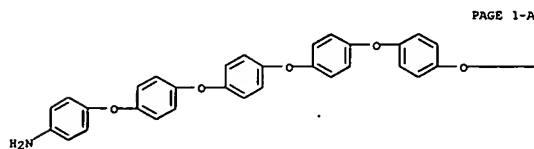


RN 77496-59-4 CAPLUS  
CN Carbonic acid, 1,4-phenylene bis(1,3-dihydro-1,3-dioxo-5-isobenzofuranyl) ester, polymer with 4,4'-[oxybis(4,1-phenyleneoxy-4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

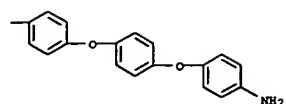
CM 1

CRN 77496-52-7  
CMF C24 H10 O12

CM 2

CRN 77496-22-1  
CMF C48 H36 N2 O7

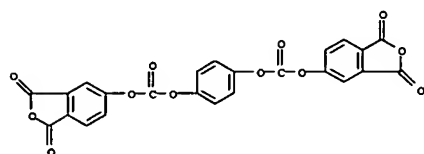
PAGE 1-A



RN 77496-60-7 CAPIUS  
 CN Carbonic acid, 1,4-phenylene bis(1,3-dihydro-1,3-dioxo-5-isobenzofuranyl) ester, polymer with 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy-4,1-phenyleneoxy-4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

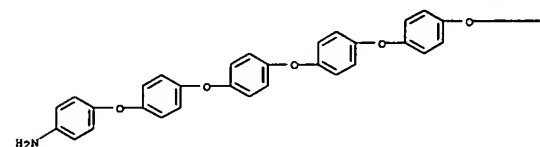
CM 1

CRN 77496-52-7  
 CMF C24 H10 O12



CM 2

CRN 77496-24-3  
 CMF C54 H40 N2 O8



AB Thermomech. spectroscopy is used to determine the durability of aromatic polyimides as a fraction of their mol. and supermol. structure. The method was also used to determine the activation energy of mech. degradation and

the structure-sensitive coefficient of polyimides fibers in the temperature range

significantly higher than the glass transition temperature

ACCESSION NUMBER: 1981:85531 CAPIUS

DOCUMENT NUMBER: 94:85531

TITLE: Working capacity regions of poly(arylenimide) fibers  
 AUTHOR(S): Prokopchuk, N. R.; Bronnikov, S. V.; Korzhavin, L. N.;

Frenkel, S. Ya.

CORPORATE SOURCE: Inst. Fiz.-Org. Khim., Minsk, USSR

SOURCE: Vestsi Akademii Navuk BSSR, Seriya Khimichnykh Navuk (1980), (6), 75-82

CODEN: VBSKAK; ISSN: 0002-3590

DOCUMENT TYPE: Journal

LANGUAGE: Russian

IT 53938-98-0

RL: USES (Uses)

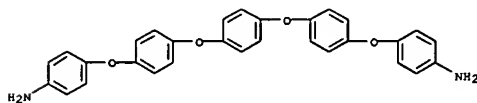
(fibers, thermomech. stability of)

RN 53938-98-0 CAPIUS

CN 1H,3H-Benzo(1,2-c:4,5-c')difuran-1,3,5,7-tetrone, polymer with 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

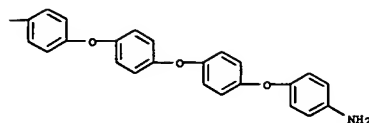
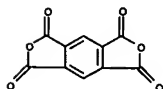
CM 1

CRN 53563-78-3  
 CMF C30 H24 N2 O4



CM 2

CRN 89-32-7  
 CMF C10 H2 O6



AB The polymers are prepared by the copolymn. of trimellitic acid anhydride (I)

(or the acid or acid chloride) or a mixture of I and isophthalic acid

with

[4-(H2N)C6H4]2O (II) and [4-[3-(H2N)C6H4O]C6H4]2SO2 (III), with 1,3-[4-(H2N)C6H4O]2C6H4 and [4-[4-(H2N)C6H4O]C6H4]2SO2, with II and [4-[4-(H2N)C6H4O]C6H4]2CO, or with 3 similar monomer mixts. The copolymers are suitable for injection molding and have good heat resistance. Thus, a copolymer [76298-49-2] prepared from I 3.5, II 2.28, and III 1.22 mol lost 1% of its weight at 412° in N and was injection molded to prepare a molding with flexural strength 1050 kg/cm2, flexural modulus 33,000 kg/cm2, Izod impact strength (1/4 in.) 15 kg cm/cm, and heat deformation temperature 228°.

ACCESSION NUMBER: 1981:48259 CAPIUS

DOCUMENT NUMBER: 94:48259

TITLE: Thermoplastic poly(amideimide) copolymers

INVENTOR(S): Aya, Toshihiko; Sasagawa, Takeshi; Kadoi, Sho

PATENT ASSIGNEE(S): Toray Industries, Inc., Japan

SOURCE: Eur. Pat. Appl., 44 pp.

CODEN: EPMXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 17422	A1	19801015	EP 1980-300932	19800325
EP 17422	B1	19831130		
	R: DE, FR, GB, NL			
JP 55129421	A2	19801007	JP 1979-35503	19790328
US 4299945	A	19811110	US 1980-133854	19800325
			JP 1979-35503	A 19790328

PRIORITY APPL. INFO.:

IT 76298-49-2P

RL: PREP (Preparation)

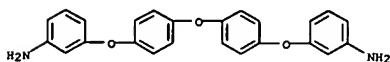
(manufacture of moldable, heat-resistant)

RN 76298-49-2 CAPIUS

CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, polymer with 4,4'-oxybis[benzenamine] and 3,3'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

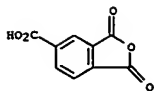
CRN 58883-55-9  
 CMF C24 H20 N2 O3



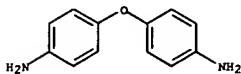
CM 2

CRN 552-30-7  
 CMF C9 H4 O5





CM 3

CRN 101-90-4  
CMF C12 H12 N2 O

AB A heat-resistant paste useful in photoforming high-d. hybrid and printed circuits consists of 21 heat-resistant photoresist selected from polyimides, polyamide-polyimides, and poly(amido acid), solvents for the above photoresists, and 21 elec. conductive particle additive selected from metals, metal oxides, metal nitrides, metal carbides, C,

and B. Thus, a polyimide (prepared from 4,4'-di(m-aminophenoxy)diphenyl ether and 3,3',4,4'-benzophenonetetracarboxylic dianhydride) 100, tetramethylolmethane tetraacrylate 30, and benzoin iso-Pr ether 4 parts were dissolved in N-methylpyrrolidone 430 and PhMe 70 parts, and a 1:1 Ag (7000 Å)-Pd (0.5 μ) mixture 550 parts was added to form a paste. The paste was coated on a glass support, dried, imagewise exposed 5 min with

a 3-kW Hg lamp to form a predetd. pattern, washed with N-methylpyrrolidone, and baked 30 min at 150° to form an elec. conductive pattern (20 lines/cm resolution). The resistivity was  $5 \times 10^{-4}$  Ω-cm, and did not change much on heating. Adhesion to support was also satisfactory.

ACCESSION NUMBER: 1980:577304 CAPLUS  
DOCUMENT NUMBER: 93:177304  
TITLE: Heat-resistant pastes for photoforming electronic circuits  
INVENTOR(S): Ohmura, Kaoru; Watanabe, Takeshi; Kimura, Takeo  
PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
CODEN: JFOOKAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 55009539	A2	19800123	JP 1978-82121	19780707
PRIORITY APPLN. INFO.:			JP 1978-82121	A 19780707

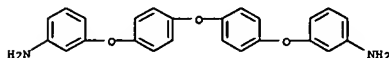
IT 58883-56-0  
RL: TEM (Technical or engineered material use); USES (Uses)  
(photoresist compns. containing, heat-sensitive, for printed elec.

circuit fabrication)

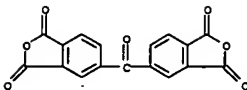
RN 58883-56-0 CAPLUS

CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with 3,3'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 58883-55-9  
CMF C24 H20 N2 O3

CM 2

CRN 2421-28-5  
CMF C17 H6 O7

AB The reactivity of analogs of O2S(p-C6H4OC6H4NH2-p)2 (I) [13080-89-2] and the properties of polyimides based on these diamines are a function of their structure. The rate consta. of acylation of the diamines with 4,4'-carbonyldipthalic anhydride [2421-28-5] were used to determine the effect of the oxyphenylene group on the reactivity of the NH2 group. The acylation rate consta. of 4,4'-sulfonyldianiline [80-08-0] and I were 0.0021 and 0.48 l/mol-s, resp. An effect of the screening character of the sulfonylphenylene fragment on the softening temperature and stress-strain

properties of polyimides prepared from different tetracarboxylic acids was

established.  
ACCESSION NUMBER: 1980:532859 CAPLUS  
DOCUMENT NUMBER: 93:132859  
TITLE: Polyimides with ether-sulfone groups in the amino component  
AUTHOR(S): Koton, M. M.; Svetlichnyl, V. M.; Kudryavtsev, V. V.; Smirnova, V. E.; Maricheva, T. A.; Aleksandrova, E. P.; Mironov, G. S.; Ustinov, V. A.; Moskvichev, Yu. A.

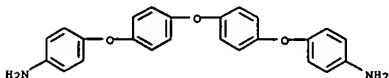
A. CORPORATE SOURCE: Inst. Vysokomol. Soedin., Leningrad, USSR  
SOURCE: Vysokomolekulyarnye Soedineniya, Seriya A (1980), 22(5), 1058-62

DOCUMENT TYPE: CODEN: VYSAAF; ISSN: 0507-5475  
LANGUAGE: Journal  
Russian

IT 13080-88-1  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(acylation of, by carbonyldipthalic anhydride, kinetics of)

RN 13080-88-1 CAPLUS

CN Benzenamine, 4,4'-[oxybis(4,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)



IT 53938-96-8 53938-99-1 72356-18-4  
74951-98-7

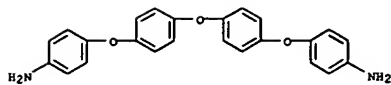
RL: USES (Uses)  
(film, physicochem. properties of)

RN 53938-96-8 CAPLUS

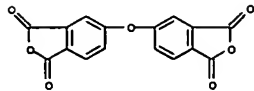
CN 1,3-Isobenzofurandione, 5,5'-oxybis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

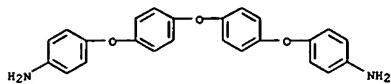
CRN 13080-88-1  
CMF C24 H20 N2 O3



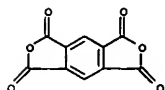
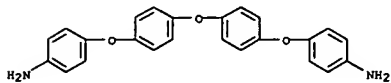
CH 2

CRN 1823-59-2  
CHF C16 H6 O7RN 53938-99-1 CAPLUS  
CH 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with  
4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

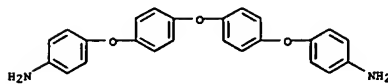
CH 1

CRN 13080-88-1  
CHF C24 H20 N2 O3

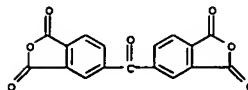
CH 2

CRN 89-32-7  
CHF C10 H2 O6RN 72356-18-4 CAPLUS  
CH 1,3-isobenzofurandione, 5,5'-carbonylbis-, polymer with

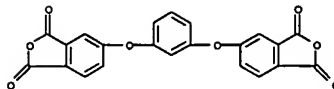
CH 1

CRN 13080-88-1  
CHF C24 H20 N2 O3

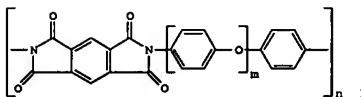
CH 2

CRN 2421-28-5  
CHF C17 H6 O7RN 74951-98-7 CAPLUS  
CH 1,3-isobenzofurandione, 5,5'-[1,3-phenylenebis(oxy)]bis-, polymer with  
4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CH 1

CRN 18959-92-7  
CHF C22 H10 O8

CH 2

CRN 13080-88-1  
CHF C24 H20 N2 O3

AB The displacement of maximum in the large angle x-ray diffractograms of films and fibers from polyimides of the general formula I ( $m = 1, 2, 3$  and 4) used in measurement of the elasticity modulus ( $E_c$ ) of the crystal lattice on longitudinal extension of samples is related to the existence of crystallog. or mesomorphic modifications with different chain conformations in the polymer mol. The projection of the repeating unit of I on the texture axis ( $c'$ ) and  $E_c$  changed significantly on transition from measurement of one reflex to another which was related to the crystallog. modification of the sample on uniaxial extension. The low  $c'$  and  $E_c$  values were related to chains with coiled conformations. The maximum corresponding to different modifications overlapped due to a proximity of  $c'$  values, and the  $c'$  and  $E_c$  values depended on the contribution of each conformation to the intensity of a composite maximum

ACCESSION NUMBER: 1980:198938 CAPLUS  
DOCUMENT NUMBER: 92:198938  
TITLE: Conformational polymorphism of aromatic polyimides and its effect on the x-ray measurements of elastic

moduli of crystal lattices  
AUTHOR(S): Ginzburg, B. M.; Magdalev, E. T.; Volosatov, V. N.; Tuichiev, Sh.

CORPORATE SOURCE: Tadzh. Gos. Univ., Dushanbe, USSR  
SOURCE: Vysokomolekulyarnye Soedineniya, Seriya A (1980), 22(3), 520-5  
CODEN: VYSAAF; ISSN: 0507-5475

DOCUMENT TYPE: Journal  
LANGUAGE: Russian

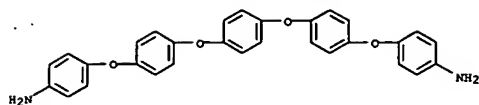
IT 53938-98-0 53938-99-1

RL: USES (Uses)  
(conformational polymorphism of crystalline, x-ray measurement of elastic moduli in relation to)

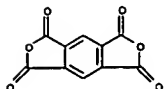
RN 53938-98-0 CAPLUS  
CH 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with  
4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CH 1

CRN 53563-78-3  
CHF C30 H24 N2 O4

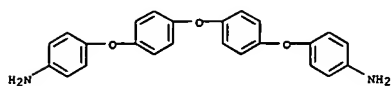


CM 2

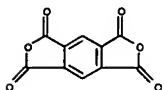
CRN 89-32-7  
CMF C10 H2 O6

RN 53938-99-1 CAPLUS  
CM 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1

CRN 13080-88-1  
CMF C24 H20 N2 O3

CM 2

CRN 89-32-7  
CMF C10 H2 O6

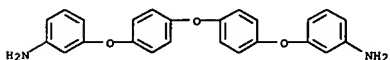
L42 ANSWER 179 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
AB A polyimide solution was mixed with 5-2000 phr metal or metal oxide to give a composition with excellent heat resistance and adhesive properties. Thus, a solution of 100 parts 3,3',4,4'-benzophenonetetracarboxylic dianhydride-4,4'-bis(m-aminophenoxy)diphenyl ether copolymer [58883-56-0] (polyimide) in 430 parts N-methylpyrrolidone and 70 parts PhMe was ball-milled with 400 parts 1:1 mixture of powdered Pd (average diameter 5 μm) and powdered Ag (average diameter 700 Å), screen-printed on an Al2O3 board, and heat-treated at 100° for 1 h to give an elec.-conducting pattern with elec. resistance <0.2 Ω. The pattern showed no changes in elec. resistance and no delamination after 30 min at 450°.

ACCESSION NUMBER: 1980:147871 CAPLUS  
DOCUMENT NUMBER: 92:147871  
TITLE: Polyimide compositions  
INVENTOR(S): Omura, Kaoru; Kimura, Takeo; Shibasaki, Ichiro  
PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
CODEN: JKKXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

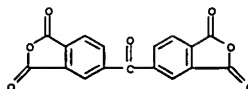
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 54149759	A2	19791124	JP 1978-58036	19780516
PRIORITY APPLN. INFO.:			JP 1978-58036	A 19780516

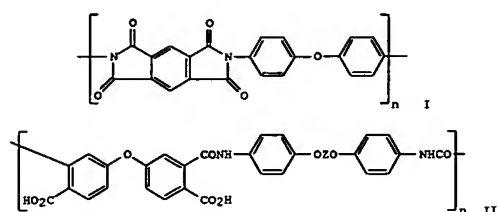
IT 58883-56-0  
RL: USES (Uses)  
(elec. conductors, containing silver and palladium, heat-resistant)  
RN 58883-56-0 CAPLUS  
CM 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with 3,3'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1

CRN 58883-55-9  
CMF C24 H20 N2 O3

CM 2

CRN 2421-28-5  
CMF C17 H6 O7



AB The relationship between chemical structure and thermooxidative stability of 16 oxyphenylene group-containing polyimides, e.g. I [25038-81-7], was examined

by thermogravimetric anal. The thermal transformations of poly(amic acids) II (Z = p-C6H4 [72979-61-4] and m-C6H4 [9043-11-2]) to the corresponding polyimides were examined at 20-800° by thermogravimetric anal., DTA, and vacuum thermodegradn. anal.

ACCESSION NUMBER: 1980:147437 CAPIUS  
DOCUMENT NUMBER: 92:147437

TITLE: Investigation of thermal and thermooxidative degradation of some polyimides containing

oxyphenylene

groups in the main chain  
AUTHOR(S): Sazanov, Yu. N.; Florinskii, F. S.; Koton, M. M.

CORPORATE SOURCE: Inst. Macromol. Comp., Leningrad, USSR

SOURCE: European Polymer Journal (1979), 15(8), 781-6

CODEN: EUPJAG; ISSN: 0014-3057

DOCUMENT TYPE: Journal

LANGUAGE: English

IT 53938-96-8 53938-97-9 53938-98-0

53938-99-1

RL: PRP (Properties)

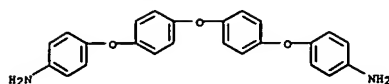
(thermal properties of)

RN 53938-96-8 CAPIUS  
CN 1,3-Isobenzofurandione, 5,5'-oxybis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 13080-88-1

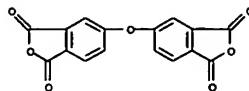
CMF C24 H20 N2 O3



CM 2

CRN 1823-59-2

CMF C16 H6 O7



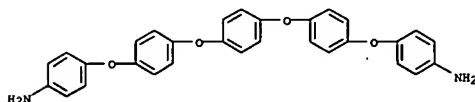
RN 53938-97-9 CAPIUS

CN 1,3-Isobenzofurandione, 5,5'-oxybis-, polymer with 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 53563-78-3

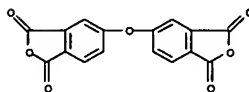
CMF C30 H24 N2 O4



CM 2

CRN 1823-59-2

CMF C16 H6 O7



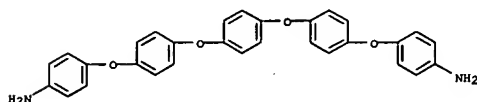
RN 53938-98-0 CAPIUS

CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 53563-78-3

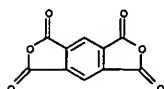
CMF C30 H24 N2 O4



CM 2

CRN 89-32-7

CMF C10 H2 O6



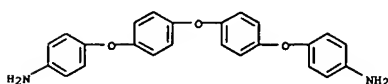
RN 53938-99-1 CAPIUS

CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 13080-88-1

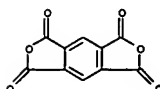
CMF C24 H20 N2 O3



CM 2

CRN 89-32-7

CMF C10 H2 O6



L42 ANSWER 181 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB The flexibility is calculated theor. for chains of a large number of polyimides and several polyamic acids containing hinge atoms. High flexibility was observed for most of the polyimides. In an equivalent freely jointed chain, the

Kuhn segment contained 5-6 linear bonds and the persistence length varied mainly in the range 10-20 Å. The dependence of persistence length on the number of hinge atoms was similar for the dianhydride and diamine fragments of the polyimide. For the polyamic acids, the exptl. values for

unperturbed dimensions of the mol. coils could be accounted for only by assuming a predominantly meta addition of the amide groups.

ACCESSION NUMBER: 1980:147327 CAPIUS  
 DOCUMENT NUMBER: 92:147327  
 TITLE: Theoretical analysis of the flexibility of polyimides and polyamic acids  
 AUTHOR(S): Birshtein, T. M.; Goryunov, A. N.  
 CORPORATE SOURCE: Inst. Vysokomol. Soedin., Leningrad, USSR  
 SOURCE: Vysokomolekulyarnye Soedineniya, Seriya A (1979), 21(9), 1990-8  
 CODEN: VYSAAF; ISSN: 0507-5475  
 JOURNAL

DOCUMENT TYPE:  
 LANGUAGE: Russian

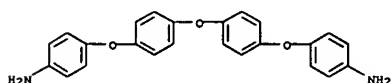
IT 53563-77-2 53563-79-4 53938-96-8  
 53938-97-9 53938-98-0 53938-99-1  
 72356-12-8 72356-13-9 72356-14-0  
 72356-15-1 72356-16-2 72356-17-3  
 72356-18-4 72356-19-5

RL: USES (Uses)  
 (persistence length and Kuhn fragment of, calcn. of)

RN 53563-77-2 CAPIUS  
 CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1

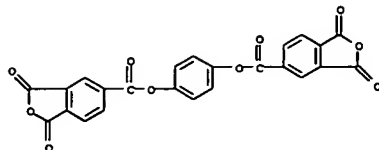
CRN 13080-88-1  
 CMF C24 H20 N2 O3



CM 2

CRN 2770-49-2  
 CMF C24 H10 O10

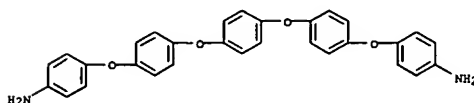
L42 ANSWER 181 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)



RN 53563-79-4 CAPIUS  
 CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

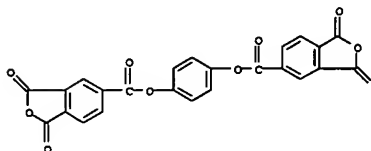
CM 1

CRN 53563-78-3  
 CMF C30 H24 N2 O4



CM 2

CRN 2770-49-2  
 CMF C24 H10 O10

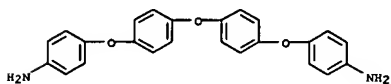


RN 53938-96-8 CAPIUS  
 CN 1,3-Isobenzofurandione, 5,5'-oxybis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1

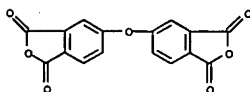
L42 ANSWER 181 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)

CRN 13080-88-1  
 CMF C24 H20 N2 O3



CM 2

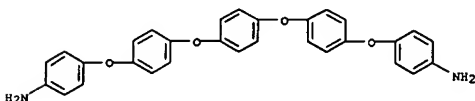
CRN 1823-59-2  
 CMF C16 H6 O7



RN 53938-97-9 CAPIUS  
 CN 1,3-Isobenzofurandione, 5,5'-oxybis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1

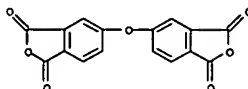
CRN 53563-78-3  
 CMF C30 H24 N2 O4



CM 2

CRN 1823-59-2  
 CMF C16 H6 O7

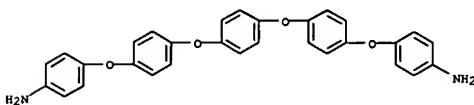
L42 ANSWER 181 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)



RN 53938-98-0 CAPIUS  
 CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

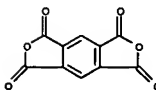
CM 1

CRN 53563-78-3  
 CMF C30 H24 N2 O4



CM 2

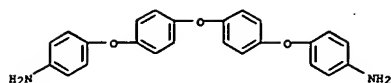
CRN 89-32-7  
 CMF C10 H2 O6



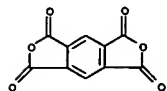
RN 53938-99-1 CAPIUS  
 CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1

CRN 13080-88-1  
 CMF C24 H20 N2 O3

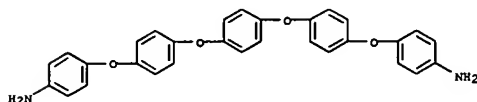


CM 2

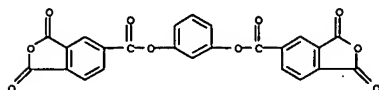
CRN 89-32-7  
CMF C10 H2 O6

RN 72356-12-8 CAPLUS  
CM 5-isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,3-phenylene ester, polymer with 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

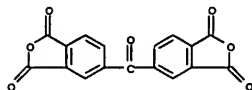
CM 1

CRN 53563-78-3  
CMF C30 H24 N2 O4

CM 2

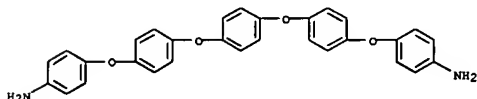
CRN 29639-48-3  
CMF C24 H10 O10

L42 ANSWER 181 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)  
CRN 2421-28-5  
CMF C17 H6 O7

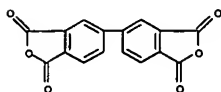


RN 72356-15-1 CAPLUS  
CM [5,5'-Bisobenzofuran]-1,1',3,3'-tetrone, polymer with 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 53563-78-3  
CMF C30 H24 N2 O4

CM 2

CRN 2420-87-3  
CMF C16 H6 O6

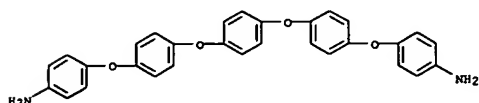
RN 72356-16-2 CAPLUS  
CM 5-isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,3-phenylene ester, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

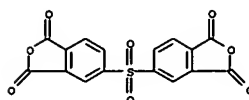
CRN 29639-48-3  
CMF C24 H10 O10

RN 72356-13-9 CAPLUS  
CM 1,3-isobenzofurandione, 5,5'-sulfonylbis-, polymer with 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

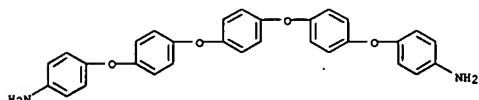
CRN 53563-78-3  
CMF C30 H24 N2 O4

CM 2

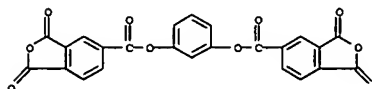
CRN 2540-99-0  
CMF C16 H6 O8 S

RN 72356-14-0 CAPLUS  
CM 1,3-isobenzofurandione, 5,5'-carbonylbis-, polymer with 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

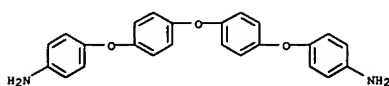
CM 1

CRN 53563-78-3  
CMF C30 H24 N2 O4

CM 2

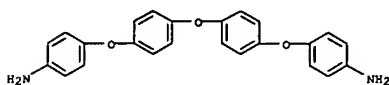


CM 2

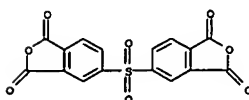
CRN 13080-88-1  
CMF C24 H20 N2 O3

RN 72356-17-3 CAPLUS  
CM 1,3-isobenzofurandione, 5,5'-sulfonylbis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 13080-88-1  
CMF C24 H20 N2 O3

CM 2

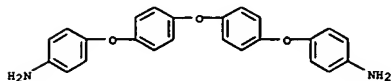
CRN 2540-99-0  
CMF C16 H6 O8 S

RN 72356-18-4 CAPLUS

L42 ANSWER 181 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)  
CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with  
4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

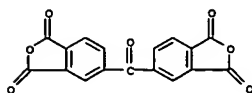
CM 1

CRN 13080-88-1  
CHF C24 H20 N2 O3



CM 2

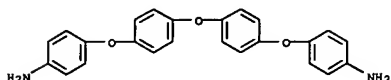
CRN 2421-28-5  
CHF C17 H6 O7



RN 72356-19-5 CAPIUS  
CN [5,5'-Bis(isobenzofuran)-1,1',3,3'-tetrone, polymer with  
4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 13080-88-1  
CHF C24 H20 N2 O3



CM 2

CRN 2420-87-3  
CHF C16 H6 O6

L42 ANSWER 182 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
AB Heat-resistant and elec. conductive adhesives were prepared from 100  
parts  
m-phenylenediamine-trimellitic anhydride chloride copolymer (I)  
[26678-20-6] or 4,4'-di(m-aminophenoxy)diphenyl ether-trimellitic  
anhydride chloride copolymer (71865-74-2) and 5-2000 parts Ag,  
Pd, or Ru oxide. Thus, I 100, N-methylpyrrolidone 240, AcNMe2 160, and

Ag  
(700 Å) 400 parts were milled, printed on aluminum to form elec.  
conductive lines, dried to give resistance <0.2Ω/line, and heated at  
400° for 1 h to give resistance <0.3 Ω.

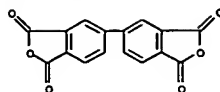
ACCESSION NUMBER: 1980:130214 CAPIUS  
DOCUMENT NUMBER: 92:130214  
TITLE: Polyamide imide compositions containing granules  
INVENTOR(S): Omura, Kaoru; Shibasaki, Ichiro; Kimura, Takeo  
PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
CODEN: JKOQAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 3  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 54143462	A2	19791108	JP 1978-51214	19780428
JP 57026698	B4	19820605		
US 4377652	A	19830322	US 1979-10290	19790208
GB 2016487	A	19790926	GB 1979-4632	19790209
GB 2016487	B2	19830223		
DE 2905857	A1	19790830	DE 1979-2905857	19790215
DE 2905857	C2	19860925		
NL 7901256	A	19790821	NL 1979-1256	19790216
NL 181739	B	19870518		
NL 181739	C	19871016		
CA 1123981	A1	19820518	CA 1979-321623	19790216
CA 1143084	A2	19830315	CA 1981-384056	19810828
GB 2104084	A	19830302	GB 1982-10337	19820407
GB 2104084	B2	19830622		
GB 2103633	A	19830223	GB 1982-10524	19820408
GB 2103633	B2	19830713		

PRIORITY APPLN. INFO.:

JP 1978-16612	A	19780217
JP 1978-51214	A	19780428
JP 1978-61637	A	19780525
JP 1978-62604	A	19780525
JP 1978-62605	A	19780525
JP 1978-88363	A	19780721
JP 1978-88364	A	19780721
JP 1978-88365	A	19780721
JP 1978-88367	A	19780721
JP 1978-89391	A	19780724

L42 ANSWER 181 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)



L42 ANSWER 182 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)  
JP 1978-89392 A 19780724

JP 1978-89393 A 19780724

JP 1978-90933 A 19780727

JP 1978-90934 A 19780727

GB 1979-4632 A3 19790209

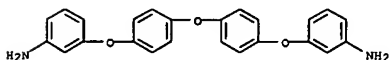
CA 1979-321623 A3 19790216

IT 71865-74-2  
RL: TEM (Technical or engineered material use); USES (Uses)  
(adhesives, containing silver and palladium, elec. conductive and  
heat-resistant)

RN 71865-74-2 CAPIUS  
CN 5-Isobenzofurancarboxyl chloride, 1,3-dihydro-1,3-dioxo-, polymer with  
3,3'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

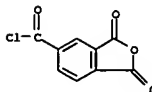
CM 1

CRN 58883-55-9  
CHF C24 H20 N2 O3

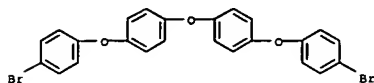


CM 2

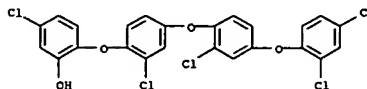
CRN 1204-28-0  
CHF C9 H3 Cl O4



L42 ANSWER 183 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB  $\alpha,\alpha'$ -Bis(triphenylphosphine)polyethers such as  
 1,4-bis(p-diphenylphosphinophenoxy)benzene, 1,2-bis(p-  
 diphenylphosphinophenoxy)ethane,  $\beta,\beta'$ -bis(p-  
 diphenylphosphinophenoxy)diethyl ether, and 1,2-bis[ $\beta,\beta'$ -(p-  
 diphenylphosphinophenoxy)ethoxy]ethane were prepared by the metalation of  
 the corresponding  $\alpha,\alpha'$ -dibromophenyl polyethers with BuLi  
 followed by reaction with  $\text{Ph}_2\text{PCL}$ . The preparation of  $\alpha,\alpha'$ -  
 dibromophenyl polyethers was also reported.  
 ACCESSION NUMBER: 1980:129026 CAPIUS  
 DOCUMENT NUMBER: 92:129026  
 TITLE: Polyethers. 1. Preparation of  $\alpha,\alpha'$ -  
 bis(triphenylphosphine) polyethers  
 AUTHOR(S): Tashiro, Masashi; Sumida, Tsuyoshi; Fukata, Gouki  
 CORPORATE SOURCE: Res. Inst. Ind. Sci., Kyushu Univ. 86, Fukuoka, 812,  
 Japan  
 SOURCE: Journal of Organic Chemistry (1980), 45(6), 1156-8  
 CODEN: JOCEAH; ISSN: 0022-3263  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 72659-51-97  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (preparation and properties of)  
 RN 72659-51-9 CAPIUS  
 CN Benzene, 1,1'-oxybis[4-(4-bromophenoxy)- (9CI) (CA INDEX NAME)]



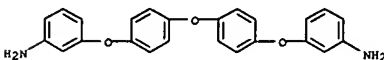
L42 ANSWER 184 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB The interpretation of high-pressure liquid chromatog. and gas  
 chromatog./mass spectrometric data in order to identify organic compds.  
 in a  
 complex wastewater from a specialty chems. plant is illustrated.  
 5-Chloro-2-(2,4-dichlorophenoxy)phenol [3380-34-5], a compound  
 manufactured in  
 the plant, and related precursors and byproducts were identified.  
 ACCESSION NUMBER: 1980:64237 CAPIUS  
 DOCUMENT NUMBER: 92:64237  
 TITLE: Identification of organic compounds in an industrial  
 waste water  
 AUTHOR(S): Hites, Ronald A.; Lopez-Avila, Viorica  
 CORPORATE SOURCE: Sch. Public Environ. Aff., Indiana Univ.,  
 Bloomington,  
 IN, 47405, USA  
 SOURCE: Analytical Chemistry (1979), 51(14), 1452A-1456A  
 CODEN: ANCHAM; ISSN: 0003-2700  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 72601-77-5  
 RL: ANT (Analyte); ANST (Analytical study)  
 (identification of, in industrial wastewater, high-pressure liquid  
 chromatog. and gas chromatog.-mass spectrometry in)  
 RN 72601-77-5 CAPIUS  
 CN Phenol, 5-chloro-2-[2-chloro-4-(2-chloro-4-(2,4-  
 dichlorophenoxy)phenoxy)phenoxy]- (9CI) (CA INDEX NAME)]



L42 ANSWER 185 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB Heat-resistant photoresist compns. contain: (1) 100 parts of  $\geq 1$   
 polymer selected from polyamide-acid, polyamide-amine,  
 polyamide-acid-amine, poly(mercaptamide), poly(hydroxyamide),  
 polyhydrazide, polyoxathiazahydrazide, and organic polar solvent-soluble  
 polyimide; (2) 0.1-100 parts of a compound having  $\geq 2$  ethylenically  
 unsatd. bonds/mol.; and (3)  $> 0.01$ -20 parts of  $\geq 1$  photopolymn.  
 initiator selected from carbonyl compds., peroxides, azo compds., S  
 compds., and halides. The photoresists not only exhibit good heat  
 resistance but also exhibit high sensitivity and good elec. insulating  
 properties. Thus, m-phenylenediamine 3.1 and pyromellitic dianhydride  
 5.5  
 g were reacted in DMF, then tetramethylethylene tetracrylate 0.9 and  
 benzoin iso-Pr ether 0.3 g were added to the resultant polyamide acid  
 solution to give a photoresist composition. The hardened photoresist  
 patterns  
 showed excellent heat resistance ( $\leq 350^\circ$ ).  
 ACCESSION NUMBER: 1980:50100 CAPIUS  
 DOCUMENT NUMBER: 92:50100  
 TITLE: Heat-resistant photo resists compositions  
 INVENTOR(S): Ohmura, Kaoru; Shibasaki, Ichiro; Kimura, Takeo  
 PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

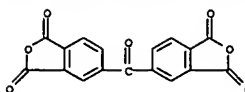
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 54109828	A2	19790828	JP 1978-16611	19780217
PRIORITY APPLN. INFO.:			JP 1978-16611	A 19780217

IT 58883-56-0  
 RL: USES (Uses)  
 (photosensitive compns. containing, heat-resistant)  
 RN 58883-56-0 CAPIUS  
 CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with  
 3,3'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 58883-55-9  
 CMP C24 H20 N2 O3

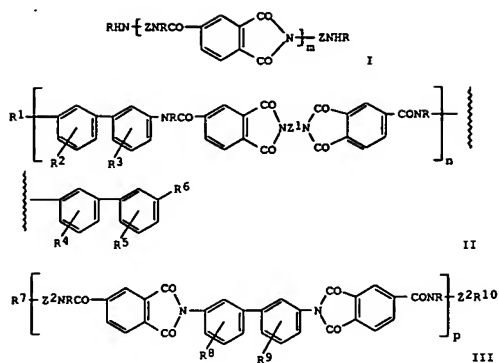


CM 2  
 CRN 2421-28-5  
 CMP C17 H6 O7

L42 ANSWER 185 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)

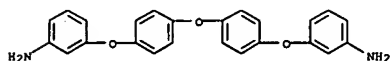




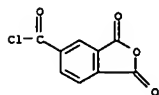


AB A photoresist material which is heat-resistant and has good insulating properties consists of (1) a photosensitive compound 0.01-20, (2) a compound with  $\geq 1$  ethylenic unsatd. double bond 0-100, and (3) a polymer as I (R = H or cinnamoyl, acryloyl, or methacryloyl radicals; and Z = bivalent Ph or C chain with bivalent Ph end members), II (R = the same as above; R1, R6 = NCO or urethane formed from NCO and cinnamyl alc., hydroxyalkyl methacrylate or acrylate; R2-R5 = H, Cl-4 alkyl, or halogen; and Z1 = bivalent Ph, biphenyl, or 3-member chain with bivalent Ph end members), or III (R = same as above; R7, R10 = NCO or urethane formed from NCO and cinnamyl alc., or hydroxyalkyl methacrylate or acrylate; R8, R9 = H, Cl-4 alkyl, or halogen; and Z2 = the same groups as Z1 and Z) 100 weight parts and with a viscosity of 0.1-2.0. Thus, in preparation of a photoresist, m-phenylenediamine 2.5 g and pyridine 2 mL were dissolved under dry N2 in N,N-dimethylacetamide 35 mL, the solution after cooling to 5° was mixed with the 4-acid chloride of trimellitic anhydride 4.3 g, the solution after cooling to room temperature was stirred and a mixture of acetic anhydride 10 and pyridine 4 mL added, the solution was stirred 2 h at 50° and cinnamoyl chloride 3.8 g and then added to a MeOH 250 and H2O 500 mL solution, the precipitate was washed and dried, this precipitate 0.5 and N,N'-tetrabutyl-4,4'-diaminobenzophenone 0.01 g were dissolved in

CRN 58883-55-9  
CMF C24 H20 N2 O3



CM 2  
CRN 1204-28-0  
CMF C9 H3 Cl O4



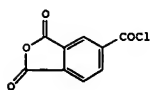
(Continued)  
N,N-dimethylacetamide 10.0 mL, and the soln. was coated on a glass substrate and dried to give a photoresist 5-μ thick. This resist was exposed with a 3kW Hg lamp for 5 min through a mask and developed with N,N-dimethylacetamide to give a photoresist pattern which on heating at 10°/min in a N2 flow showed no loss at  $\leq 450^\circ$  and had a sp. resistivity of  $2 \times 10^{-16} \Omega\text{-cm}$ .

ACCESSION NUMBER: 1979:602251 CAPLUS  
DOCUMENT NUMBER: 91:202251  
TITLE: Heat-resistant photoresist material  
INVENTOR(S): Ohmura, Kaoru; Shibasaki, Ichiro; Kimura, Takeo; Kimura, Muneaki  
PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan  
SOURCE: Ger. Offen., 64 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2849981	A1	19790523	DE 1978-2849981	19781117
DE 2849981	C2	19807016		
JP 54070820	A2	19790607	JP 1977-137256	19771117
JP 60054666	B4	19851130		
JP 54088116	A2	19790713	JP 1977-155610	19771226
JP 59050049	B4	19841206		
JP 54089623	A2	19790716	JP 1977-156687	19771227
JP 60023341	B4	19850607		
JP 54091218	A2	19790719	JP 1977-157481	19771228
JP 59050050	B4	19841206		
GB 2008784	A	19790606	GB 1978-44576	19781115
GB 2008784	B2	19820415		
US 4180404	A	19791225	US 1978-961534	19781116
US 4208477	A	19800617	US 1978-961462	19781116
BE 872083	A1	19790517	BE 1978-191780	19781117
FR 2409535	A1	19790615	FR 1978-32525	19781117
FR 2409535	B1	19830121		
US 4310641	A	19820112	US 1979-62800	19790801
US 4310641	A	19820223	US 1979-104050	19791217
PRIORITY APPLN. INFO.:			JP 1977-137256	A 19771117
			JP 1977-155610	A 19771226
			JP 1977-156687	A 19771227
			JP 1977-157481	A 19771228
			US 1978-961462	A3 19781116
			US 1978-961534	A3 19781116

IT 71065-74-2D, cinnamate or acrylate group-modified  
RL: USES (Uses)  
(photosensitive compns. containing, for photoresists)

RN 71065-74-2 CAPLUS  
CN 5-Isobenzofurancarboxyl chloride, 1,3-dihydro-1,3-dioxo-, polymer with 3,3'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)



AB Linear polyamideimides (39) are prepared by reacting compound I with m-phenylenediamine (II), 3,3'-diaminobiphenyl (III), II and III, 2,4-diaminotoluene, bis[4-(3-aminophenoxy)phenyl] ether, or similar compds. or by reacting a diisocyanate, such as 3,3'-diisocyanatobiphenyl or 4,4'-diisocyanatodiphenylmethane, with a carboxy-terminated bisimide prepared from I (or trimellitic anhydride) and a diamine such as III or [4-(H2N)C6H4]2O. The polyamideimides have reduced viscosity 0.3-1.5 (0.05 g in 10 mL DMF, 30°), are soluble in polar organic solvents, are resistant to heat and water, have good adhesion to surfaces, and are useful for the manufacture of elec. insulators, supports for printed circuits, elec. conductors (e.g., containing Ag or Ru oxide), etc. Thus, a solution of 100 parts I-II copolymer [26678-20-6] (reduced viscosity 0.5) in 240 parts N-methyl-2-pyrrolidinone and 160 parts AcNMe2 was mixed with 400 parts powdered Ag (70-μ particles), coated on a support, and dried to prepare an elec. conducting layer which was stable at 400° for >1 h.

ACCESSION NUMBER: 1979:594101 CAPLUS  
DOCUMENT NUMBER: 91:194101  
TITLE: Articles for electrical use and suitable compositions  
INVENTOR(S): Ohmura, Kaoru; Shibasaki, Ichiro; Kimura, Takeo  
PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan  
SOURCE: Ger. Offen., 69 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 3  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2905857	A1	19790830	DE 1979-2905857	19790215
DE 2905857	C2	19860925		
JP 54110266	A2	19790829	JP 1978-16612	19780217
JP 54143462	A2	19791108	JP 1978-51214	19780428
JP 57026698	B4	19820605		
JP 54153298	A2	19791203	JP 1978-61637	19780525
JP 54154080	A2	19791204	JP 1978-62604	19780525
JP 55016026	A2	19800204	JP 1978-88364	19780721
JP 57022162	B4	19820512		
JP 55015826	A2	19800204	JP 1978-88365	19780721
JP 60030353	B4	19850716		
JP 55015827	A2	19800204	JP 1978-88367	19780721
JP 63020707	B4	19880428		
JP 55016319	A2	19800205	JP 1978-88363	19780721

L42 ANSWER 187 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

JP 57022161	B4	19820512		
JP 55016054	A2	19800204	JP 1978-89391	19780724
JP 55015862	A2	19800204	JP 1978-89392	19780724
JP 60056622	B4	19851211		
JP 55016377	A2	19800205	JP 1978-89393	19780724
JP 55018425	A2	19800208	JP 1978-90933	19780727
JP 57026700	B4	19820605		
JP 55018426	A2	19800208	JP 1978-90934	19780727
JP 61059906	B4	19861218		
DE 2953498	C2	19890629	DE 1979-2953498	19790215

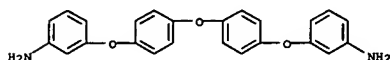
PRIORITY APPLN. INFO.:

JP 1978-16612	A	19780217
JP 1978-51214	A	19780428
JP 1978-61637	A	19780525
JP 1978-62604	A	19780525
JP 1978-62605	A	19780525
JP 1978-88363	A	19780721
JP 1978-88364	A	19780721
JP 1978-88365	A	19780721
JP 1978-88367	A	19780721
JP 1978-89391	A	19780724
JP 1978-89392	A	19780724
JP 1978-89393	A	19780724
JP 1978-90933	A	19780727
JP 1978-90934	A	19780727

IT 71865-74-2P 71866-02-9P  
 RL: PREP (Preparation)  
 (manufacture of soluble, for heat-resistant elec. apparatus)

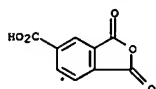
RN 71865-74-2 CAPLUS  
 CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, polymer with 3,3'-(oxybis(4,1-phenyleneoxy))bis(benzenamine) (9CI) (CA INDEX NAME)

CH 1  
 CRN 58883-55-9  
 CMF C24 H20 N2 O3



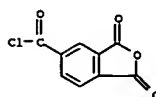
CH 2

L42 ANSWER 187 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



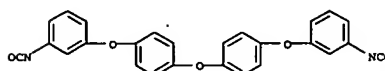
L42 ANSWER 187 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

CRN 1204-28-0  
 CMF C9 H3 Cl O4

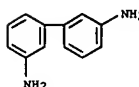


RN 71866-02-9 CAPLUS  
 CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, polymer with [1,1'-biphenyl]-3,3'-diamine and 1,1'-oxybis(4-(3-isocyanatophenoxy)benzene) (9CI) (CA INDEX NAME)

CH 1  
 CRN 32671-13-9  
 CMF C26 H16 N2 O5



CH 2  
 CRN 2050-89-7  
 CMF C12 H12 N2



CH 3  
 CRN 552-30-7  
 CMF C9 H4 O5

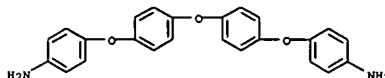
L42 ANSWER 188 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB Thermal stability of heat-resistant polymers is determined by their chemical structure and not by the supermol. structure of the sample. The correlation is examined between the temperature-dependence of the polymer strengths and heat resistance of oriented polyimide fibers. The calculated values for a series of polyimides confirmed a correlation between the initial activation energy of degradation and thermal stability of the examined polymers.

ACCESSION NUMBER: 1979:541993 CAPLUS  
 DOCUMENT NUMBER: 91:141993  
 TITLE: Evaluation of heat resistance for heat resistant polymers  
 AUTHOR(S): Prokopchuk, N. R.  
 CORPORATE SOURCE: Inst. Fiz.-Org. Khim., Minsk, USSR  
 SOURCE: Doklady Akademii Nauk BSSR (1979), 23(8), 726-9  
 CODEN: DDLRAC; ISSN: 0002-354X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian

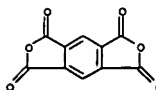
IT 53938-99-1  
 RL: USES (Uses)  
 (fibers, heat resistance of, mech. properties in relation to)

RN 53938-99-1 CAPLUS  
 CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-(oxybis(4,1-phenyleneoxy))bis(benzenamine) (9CI) (CA INDEX NAME)

CH 1  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3



CH 2  
 CRN 89-32-7  
 CMF C10 H2 O6



L42 ANSWER 189 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN

AB Polypyromellitimides having a rodlike mol. structure form fibers with 1 order of magnitude greater elasticity modulus than polymers with coiled conformations of mols. Acoustic spectroscopy was used to evaluate the effect of chemical structure of the polypyromellitimides on elasticity

and degree of orientation of their fibers. The x-ray diffraction data confirmed a correlation between the degree of crystallinity and orientation of the examined polymers. Fibers prepared from highly crystalline polyimides had similar supramol. structure with a large number of the mols.

in the ordered polymer regions.

ACCESSION NUMBER: 1979:541992 CAPIUS

DOCUMENT NUMBER: 91:141992

TITLE: Elasticity of oriented poly(pyromellitimides)

AUTHOR(S): Evseev, A. K.; Dubnova, A. M.; Korzhavin, L. N.; Panov, Yu. N.; Prokopchuk, N. R.; Florinskii, F. S.; Frenkel, S. Ya.

CORPORATE SOURCE: Inst. Vysokomol. Soedin., Leningrad, USSR

SOURCE: Vysokomolekulyarnye Soedineniya, Seriya B: Kratkie

Soobshcheniya (1979), 21(7), 485-9

CODEN: VYSBAI; ISSN: 0507-5483

DOCUMENT TYPE: Journal

LANGUAGE: Russian

IT 53938-98-0 53938-99-1

RL: USES (Uses)

(fibers, elasticity of oriented)

RN 53938-98-0 CAPIUS

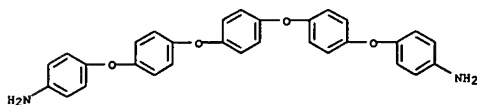
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with

4,4'-(1,4-phenylenebis(oxy-4,1-phenyleneoxy))bis(benzenamine) (9CI) (CA INDEX NAME)

CH 1

CRN 53563-78-3

CMF C30 H24 N2 O4

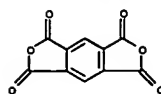


CH 2

CRN 89-32-7

CMF C10 H2 O6

L42 ANSWER 189 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)



RN 53938-99-1 CAPIUS

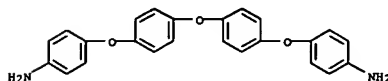
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with

4,4'-(oxybis(4,1-phenyleneoxy))bis(benzenamine) (9CI) (CA INDEX NAME)

CH 1

CRN 13080-88-1

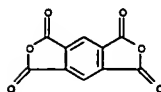
CMF C24 H20 N2 O3



CH 2

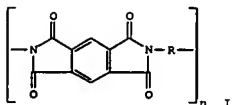
CRN 89-32-7

CMF C10 H2 O6



L42 ANSWER 190 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN

GI



AB Processes occurring when samples of fibers of 7 polyamic acids and the resp. polypyromellitimides (I) [R = p-phenylene, p,p'-biphenylene, p-terphenyl-4,4''-diyl, diphenylmethane-4,4''-diyl, benzophenone-4,4''-diyl, (p-C6H4O)3C6H4-p, and fluorene-3,6-diyl] based on them are heated in vacuo

were investigated by mass spectrometric thermal anal. (MTA) over a wide temperature range. A combination of MTA methods with a comparative

anal. of polyimides and model compds. allowed conclusions to be made concerning primary reactions responsible for thermal stability and initiation of degradation of a number of polyimide structures. The

temperature dependence of the yield of primary volatile products formed during imidization and the thermal degradation of the polyimides was divided

into 3 temperature ranges: (1) at 20-300°, imidization occurs accompanied by elimination of water and removal of solvent residues; (2) at 300-450°, degradation of defective structures in the polymer occurs, imidization is completed, and traces of solvent are removed; and (3) at 450-700°, degradation of the main initial polyimide structure occurs

and a new structure is formed which is stable at ≤700°.

ACCESSION NUMBER: 1979:422252 CAPIUS

DOCUMENT NUMBER: 91:22252

TITLE: Investigations of imidization of polypyromellitimido acids and thermal degradation of polypyromellitimides by mass spectrometric thermal analysis

AUTHOR(S): Kabilov, Z. A.; Muinov, T. M.; Shibaev, L. A.;

Sazanov, Yu. N.; Korzhavin, L. N.; Prokopchuk, N. R.

CORPORATE SOURCE: Inst. Macromol. Compd., Leningrad, USSR

SOURCE: Thermochimica Acta (1979), 28(2), 333-47

CODEN: THACAS; ISSN: 0040-6031

DOCUMENT TYPE: Journal

LANGUAGE: English

IT 53938-99-1

RL: USES (Uses)

(fibers, imidization and thermal degradation of, mass spectrometric

thermal

anal. of)

RN 53938-99-1 CAPIUS

CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with

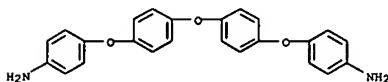
4,4'-(oxybis(4,1-phenyleneoxy))bis(benzenamine) (9CI) (CA INDEX NAME)

CH 1

L42 ANSWER 190 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)

CRN 13080-88-1

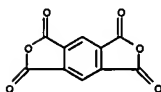
CMF C24 H20 N2 O3



CH 2

CRN 89-32-7

CMF C10 H2 O6



L42 ANSWER 191 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN

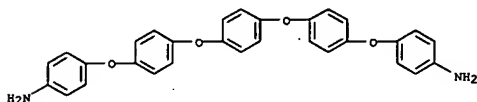
AB The contributions of chemical structure and chain geometry to the formation of ideal strength and elastic properties of 19 oriented polyarylenimide (PAI) fibers are examined and these properties are compared with actual elasticity moduli. All PAI had practically the same supramol. structure, indicating that the elastic properties of the oriented fibers depend mainly on the elastic properties of the chain itself. A general model for supramol. organizations in PAI can be proposed as a weakly crosslinked (phys.) network of extended chains with parallel-layer packing along the orientation axis and statistical distribution of ordered regions of short- and long-range order (amorphous and axial texture, resp.). The interaction of neighboring chains (strong polar interactions and hindered rotation) also leads to a high degree of cooperative thermal motion in polyimide systems, which explains the invariance of configurational entropy over the interval -200° to +400° and the retention of the same tensile strength.

ACCESSION NUMBER: 1979:153345 CAPIUS  
DOCUMENT NUMBER: 90:153345  
TITLE: Elastic properties of oriented polyarylenimides  
AUTHOR(S): Sidorovich, A. V.; Korzhavin, L. N.; Prokopchuk, N. R.; Baklagina, Yu. G.; Frenkel, S. Ya.  
CORPORATE SOURCE: Inst. Vysokomol. Soedin., Leningrad, USSR  
SOURCE: Mekhanika Polimerov (1978), (6), 970-6  
CODEN: MKPLA6; ISSN: 0025-8865  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian

IT 53938-98-0 53938-99-1  
RL: USES (Uses)  
(fibers; elasticity of, morphol. effect on)  
RN 53938-98-0 CAPIUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CH 1

CRN 53563-78-3  
CMF C30 H24 N2 O4



CH 2

CRN 89-32-7  
CMF C10 H2 O6

L42 ANSWER 192 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN

GI  
AB Nonflammable, soluble, and injection-moldable polyamides of I units (R1, R2 = alkyl, halogen; n,m = 1-4, Z1 = SO2, S, O; Z2 = 10-90:90-10 3-C6H4/4-C6H4) were prepared. For example, 864 g bis[4-(4-aminophenoxy)phenyl] sulfone was dispersed in a solution of 80 g NaOH in 3 L water and stirred with a solution of 203 g 3-C6H4(COCl)2 and 203 g 4-C6H4(COCl)2 in 10 L cyclohexanone for 3 h to give polyamide [69255-36-3] with reduced viscosity 0.68 dL/g (DMF, 30°), softening temperature 280°, injection-molding temperature 350°, tensile strength 860 kg/cm2, elongation 13%, Young's modulus 2.21 + 104 kg/cm2, and heat-distortion temperature (18.6 kg/cm2) 190°.

ACCESSION NUMBER: 1979:104612 CAPIUS  
DOCUMENT NUMBER: 90:104612  
TITLE: Manufacture of nonflammable polyamides  
INVENTOR(S): Nanaumi, Ken; Shoji, Fusaaji; Era, Susumu  
PATENT ASSIGNEE(S): Hitachi, Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 53104695	A2	19780912	JP 1977-18674	19770224
JP 59016567	B4	19840416		

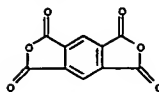
PRIORITY APPL. INFO.: JP 1977-18674 A 19770224

IT 69255-34-1P  
RL: PREP (Preparation)  
(fire-resistant, manufacture of)  
RN 69255-34-1 CAPIUS  
CN 1,3-Benzenedicarbonyl dichloride, polymer with 1,4-benzenedicarbonyl dichloride and 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CH 1

CRN 13080-88-1  
CMF C24 H20 N2 O3

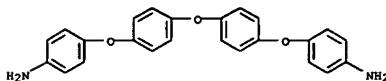
L42 ANSWER 191 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)



RN 53938-99-1 CAPIUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

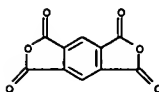
CH 1

CRN 13080-88-1  
CMF C24 H20 N2 O3

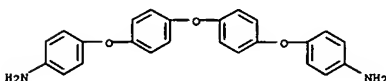


CH 2

CRN 89-32-7  
CMF C10 H2 O6

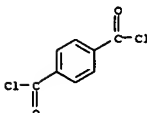


L42 ANSWER 192 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)



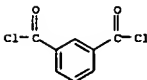
CH 2

CRN 100-20-9  
CMF C8 H4 Cl2 O2



CH 3

CRN 99-63-8  
CMF C8 H4 Cl2 O2



L42 ANSWER 193 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
AB Polyimides are classified with respect to a decrease in rigidity of the mol. chain and crystal lattice into 3 groups: polymers with rodlike chain conformations, polymers with a joint atom or group introduced into the dianhydride component, and those having an atom or group in the diamine

or in both diamine and dianhydride components. The elastic moduli of the crystal lattice of the polyimides are compared with those of the fibers. Polyimides are also classified with respect to the chemical structure of their repeating units. In each group the polyimides were classified according to the conformational similarity of mols. in the crystal lattice, similar elastic moduli of the crystal lattice along the axis of the polymer mols., and rigidity of individual macromols.

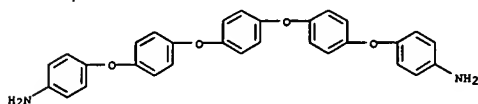
ACCESSION NUMBER: 1979:40043 CAPLUS  
DOCUMENT NUMBER: 90:40043  
TITLE: Elasticity of crystal lattices and mechanical properties of polyimides  
AUTHOR(S): Ginzburg, B. M.; Magdalev, E. T.; Volosatov, V. N.; Frenkel, S. Ya.  
CORPORATE SOURCE: Inst. Vysokomol. Soedin., Leningrad, USSR  
SOURCE: Mekhanika Polimerov (1978), (5), 781-7  
CODEN: MKPLA6; ISSN: 0025-8865  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian  
IT 53938-98-0 53938-99-1

RL: PRP (Properties)  
(chain conformation and crystal lattice elasticity of, mech. properties in relation to)

RN 53938-98-0 CAPLUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 53563-78-3  
CMF C30 H24 N2 O4



CM 2

CRN 89-32-7  
CMF C10 H2 O6

L42 ANSWER 194 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
AB X-ray investigation of 5 polyimides and 5 poly(ester imides) revealed the high thermal stability of their crystalline lattice and permitted determination of their amorphization temps. The absence of amorphous halos and the presence of 1- and 2-dimensional diffraction marked the texture x-ray diagrams. The crystal morphol. of the investigated samples was predominantly of the packet type. Formation of the latter with bending and radial distortions was caused by preliminary ordering of the polyamic acids. High heat stability was ascribed to strong intermol. interaction of macromol. chains.

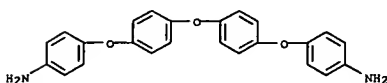
ACCESSION NUMBER: 1979:23891 CAPLUS  
DOCUMENT NUMBER: 90:23891  
TITLE: Thermal stability and characteristics of the phase state of crystalline polyimides and poly(ester

imides)  
AUTHOR(S): Lavrent'ev, V. K.; Sidorovich, A. V.  
CORPORATE SOURCE: Inst. Vysokomol. Soedin., Leningrad, USSR  
SOURCE: Vysokomolekulyarnye Soedineniya, Seriya A (1978), 20(11), 2465-72  
CODEN: VYSAAF; ISSN: 0507-5475

DOCUMENT TYPE: Journal  
LANGUAGE: Russian  
IT 53563-77-2 53563-79-4 53938-98-0  
53938-99-1  
RL: PRP (Properties)  
(amorphization and crystallization temperature and morphol. of)  
RN 53563-77-2 CAPLUS  
CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

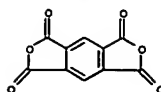
CRN 13080-88-1  
CMF C24 H20 N2 O3



CM 2

CRN 2770-49-2  
CMF C24 H10 O10

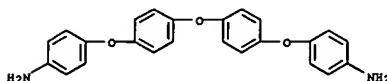
L42 ANSWER 193 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 53938-99-1 CAPLUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

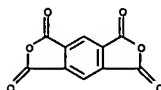
CM 1

CRN 13080-88-1  
CMF C24 H20 N2 O3

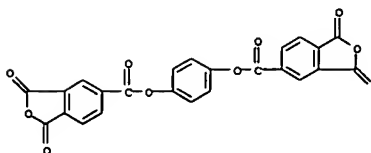


CM 2

CRN 89-32-7  
CMF C10 H2 O6



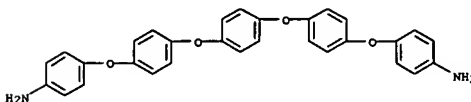
L42 ANSWER 194 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 53563-79-4 CAPLUS  
CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

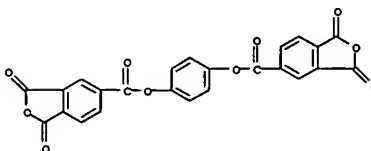
CM 1

CRN 53563-78-3  
CMF C30 H24 N2 O4



CM 2

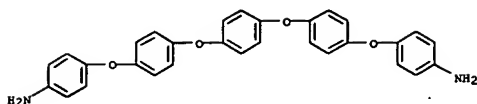
CRN 2770-49-2  
CMF C24 H10 O10



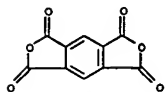
RN 53938-98-0 CAPLUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

L42 ANSWER 194 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

CM 1  
CRN 53563-78-3  
CMF C30 H24 N2 O4

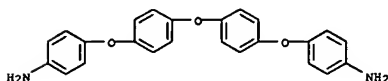


CM 2  
CRN 89-32-7  
CMF C10 H2 O6



RN 53938-99-1 CAPLUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1  
CRN 13080-88-1  
CMF C24 H20 N2 O3



CM 2  
CRN 89-32-7  
CMF C10 H2 O6

L42 ANSWER 195 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
AB The average orientation factor of polymer chains (fav), the orientation factor of crystallites (fcr), degree of crystallinity ( $\kappa$ ), tensile strength, elasticity modulus, and elongation at break were determined for 13

polyimide fibers prepared under the same conditions from pyromellitic dianhydride and various aromatic diamines (Z). In all cases fav < fcr and  $\kappa$  < 100% indicating the presence of regions with different degrees of ordering. In contrast to polyimides with rigid chains (A: Z = p-C6H4, p-C6H4C6H4-p, etc.) for which fav = .apprx.fcr = 0.86-0.97, polyimides with flexible chains (B: Z = (p-C6H4)2O, (p-C6H4O)2C6H4-p, etc.) had fav

= 0.3-0.6 (fcr = 0.92-0.95) providing evidence of the presence of conformational polymorphism and slight orientation of chains in less oriented regions. These polymers also had low  $\kappa$ . Polyimides having, according to x-ray data, a disordered structure [C: Z = (p-C6H4)2S, (p-C6H4)2CH2, etc.] had fav < 0.2. The elasticity moduli of A were 5-10 times higher than those of B, and .apprx.20 times higher than those of C.

ACCESSION NUMBER: 1979:7437 CAPLUS  
DOCUMENT NUMBER: 90:7437  
TITLE: Orientation and mechanical properties of poly(pyromellitimides)  
AUTHOR(S): Goryainov, G. I.; Kol'tsov, A. I.; Korzhavin, L. N.; Prokopchuk, N. R.; Baklagina, Yu. G.  
CORPORATE SOURCE: Inst. Vysokomol. Soedin., Leningrad, USSR  
SOURCE: Vysokomolekulyarnye Soedineniya, Seriya B: Kratkie Soobshcheniya (1978), 20(9), 689-91  
CODEN: VYSBAI; ISSN: 0507-5483  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian

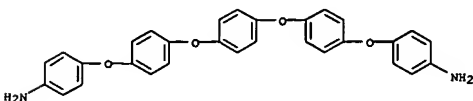
IT 53938-98-0 53938-99-1  
RL: USES (Uses)

(fiber, mech. properties and orientation of)

RN 53938-98-0 CAPLUS

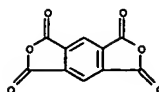
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1  
CRN 53563-78-3  
CMF C30 H24 N2 O4

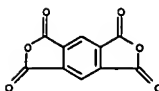


CM 2  
CRN 89-32-7  
CMF C10 H2 O6

L42 ANSWER 194 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

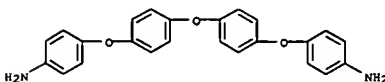


L42 ANSWER 195 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

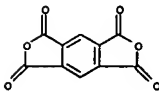


RN 53938-99-1 CAPLUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1  
CRN 13080-88-1  
CMF C24 H20 N2 O3



CM 2  
CRN 89-32-7  
CMF C10 H2 O6



L42 ANSWER 196 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN

AB Mass spectrometry was used to follow the cyclization (imide formation) of 9 polyamic acids in fiber form, the thermal degradation of the polyimides formed, and, for some polyimides, a third volatilization process at >700°. The cyclization occurred at 50-300°. The polar water ratios in the cyclizations were not the same for the various polyimides, indicating that different degrees of imidization had occurred.

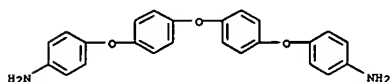
Most of the thermal destruction of the imide cycles occurred at 450-600°. Activation energies and preexponential consts. of thermal degradation of the polyimides were determined from the mass spectrometry data.

ACCESSION NUMBER: 1978:598200 CAPIUS  
DOCUMENT NUMBER: 89:199200  
TITLE: Mass-spectrometry in investigation of the thermodegradation process of polyimides  
AUTHOR(S): Kabilov, Z. A.; Muinov, T. M.; Marupov, R.; Sazanov, Yu. N.; Shibaev, L. A.  
CORPORATE SOURCE: S. U. Umarov Phys.-Tech. Inst., Dushenbe, USSR  
SOURCE: Proc. Conf. Appl. Chem., Unit Oper. Processes, 3rd (1977), 23-9. Magy. Kem. Egyesulete: Budapest, Hung.  
CODEN: 38VGAJ  
DOCUMENT TYPE: Conference  
LANGUAGE: English

IT 53938-99-1  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(cyclization of, by heat, mass spectrometry in relation to)  
RN 53938-99-1 CAPIUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

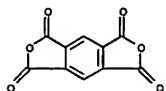
CH 1

CRN 13080-88-1  
CMF C24 H20 N2 O3



CH 2

CRN 89-32-7  
CMF C10 H2 O6



L42 ANSWER 197 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN

AB An equation was derived describing the temperature and time dependence of the elasticity modulus (E) valid for cases of deformation governed by a single kinetic process. The validity of the equation was verified by measurements of E of 16 highly oriented aromatic polyimides of different structure. The results supported the contention that the temperature dependence of E is a direct function of the configuration and the conformation of macromolecules.

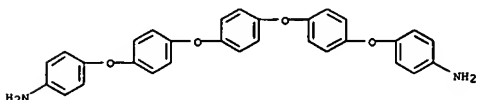
ACCESSION NUMBER: 1978:510757 CAPIUS  
DOCUMENT NUMBER: 89:110757  
TITLE: Temperature dependence of the elastic modulus of oriented polyarylenimides  
AUTHOR(S): Prokopchuk, N. R.; Vettegren, V. I.; Korzhavin, L. N.; Frenkel, S. Ya.

Inst. Vysokomol. Soedin., Leningrad, USSR  
SOURCE: Vysokomolekulyarnye Soedineniya, Seriya B: Kratkie Soobshcheniya (1978), 20(5), 388-92  
CODEN: VYSBAI; ISSN: 0507-5483  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian

IT 53938-98-0 53938-99-1  
RL: USES (Uses)  
(elasticity modulus of, temperature effect on)  
RN 53938-98-0 CAPIUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CH 1

CRN 53563-78-3  
CMF C30 H24 N2 O4



CH 2

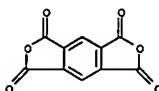
CRN 89-32-7  
CMF C10 H2 O6

L42 ANSWER 196 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN

(Continued)

L42 ANSWER 197 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN

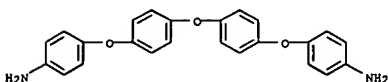
(Continued)



RN 53938-99-1 CAPIUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

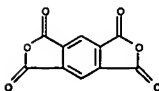
CH 1

CRN 13080-88-1  
CMF C24 H20 N2 O3



CH 2

CRN 89-32-7  
CMF C10 H2 O6



L42 ANSWER 198 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB The elongation-temperature curves of 6 polyamic acids and the corresponding polyimides consisted of 3 segments corresponding, according to the IR and x-ray diffraction data, to imidization (contraction,  $<200-10^3$ ), intramol. ordering (elongation,  $200-10^3$  to  $380-400^3$ ) and the appearance of considerable mobility in the highly elastic state (contraction,  $380-400^3$  to  $540-60^3$ ). The presence of the highly elastic state in the investigated polyimides was confirmed by the effect of temperature on stress at different strain values.

ACCESSION NUMBER: 1978:460124 CAPIUS  
 DOCUMENT NUMBER: 89:60124  
 TITLE: Highly elastic state of aromatic polyimides  
 AUTHOR(S): Sidorovich, A. V.; Efanova, N. V.; Mikhailova, N. V.  
 CORPORATE SOURCE: Inst. Vysokomol. Soedin., Leningrad, USSR  
 SOURCE: Doklady Akademii Nauk SSSR (1978), 238(5), 1120-3 [Chem.]  
 CODEN: DANKAS; ISSN: 0002-3264

DOCUMENT TYPE: Journal  
 LANGUAGE: Russian

IT 53938-98-0 53938-99-1  
 RL: PRP (Properties)

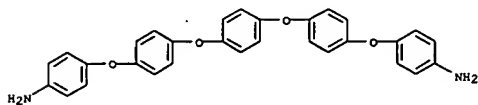
(highly elastic state of)

RN 53938-98-0 CAPIUS

CM 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

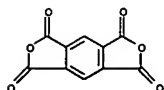
CM 1

CRN 53563-78-3  
 CMF C30 H24 N2 O4



CM 2

CRN 89-32-7  
 CMF C10 H2 O6



RN 53938-99-1 CAPIUS

CM 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with

L42 ANSWER 199 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB A quasi-crystalline structure for 14 polyimides and poly(ester imides) in both the initial amorphous stage and after imidization was shown, which is characterized by a biaxial polarizability ellipsoid with a neg. sign.

The effect of the number of oxyphenylene groups on the crystallizability of the polymers was investigated. For poly(ester imides), the effect of self-orientation of the mols. induced by conformational transition was observed. Discrete small angle x-ray pattern was shown for poly(ester imides). The appearance of long periods is caused by polymorphism.

X-ray scattering data confirmed by calcs. of the lattice energy show that the pyromellitimide chain portion determines the crystalline structure of the polyimide. The structure is determined by van der Waal's forces and obeys the principle of dense packing. This leads to the appearance of layer structure with alternating layers of diamine and dianhydride portions.

Depending on the rigidity of the diamine portion, the polyimide and poly(ester imide) show different abilities to form axial-planar or axial textures in nonoriented films.

ACCESSION NUMBER: 1978:191882 CAPIUS  
 DOCUMENT NUMBER: 88:191882  
 TITLE: Peculiarities of supermolecular structure of polyimides and polyesterimides  
 AUTHOR(S): Sidorovich, A. V.; Baklagina, Yu. G.; Kenarov, A. V.; Nadezhin, Yu. S.; Adrova, N. A.; Florinsky, F. S.  
 CORPORATE SOURCE: Inst. High Polym. Compd., Leningrad, USSR  
 SOURCE: Journal of Polymer Science, Polymer Symposia (1977), 58(Orient. Eff. Solid Polym.), 359-67  
 CODEN: JPYCAQ; ISSN: 0449-2994

DOCUMENT TYPE: Journal  
 LANGUAGE: English

IT 53563-77-2 53563-79-4 53938-98-0  
 53938-99-1

RL: PRP (Properties)

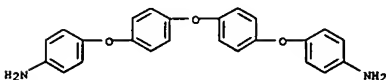
(supermol. structure of)

RN 53563-77-2 CAPIUS

CM 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1

CRN 13080-88-1  
 CMF C24 H20 N2 O3

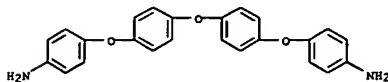


CM 2

L42 ANSWER 198 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)  
 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

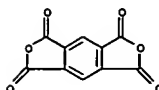
CM 1

CRN 13080-88-1  
 CMF C24 H20 N2 O3

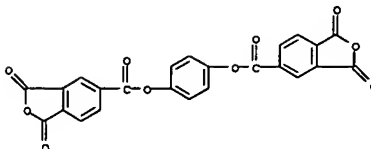


CM 2

CRN 89-32-7  
 CMF C10 H2 O6



L42 ANSWER 199 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)  
 CRN 2770-49-2  
 CMF C24 H10 O10

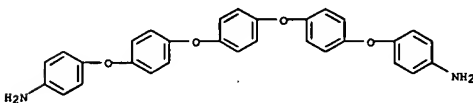


RN 53563-79-4 CAPIUS

CM 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

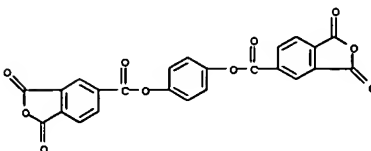
CM 1

CRN 53563-78-3  
 CMF C30 H24 N2 O4



CM 2

CRN 2770-49-2  
 CMF C24 H10 O10



RN 53938-98-0 CAPIUS

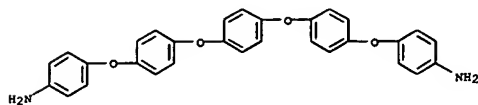
CM 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with



L42 ANSWER 199 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)  
4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

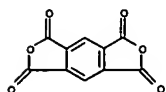
CM 1

CRN 53563-78-3  
CMF C30 H24 N2 O4



CM 2

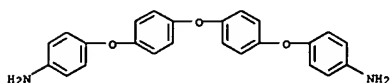
CRN 89-32-7  
CMF C10 H2 O6



RN 53938-99-1 CAPLUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1

CRN 13080-88-1  
CMF C24 H20 N2 O3



CM 2

CRN 89-32-7  
CMF C10 H2 O6

L42 ANSWER 200 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
AB The activation energy of mech. failure was selected as a measure of the strength of polymers and its values were determined for 17 aromatic polyimides of

different structure. Polyimides of quasihelical conformation closely approaching rod-like geometry, e.g. 1,7-fluorenediamine-pyromellitic dianhydride copolymer [33775-20-1], had the highest activation energy.

ACCESSION NUMBER: 1978:153139 CAPLUS

DOCUMENT NUMBER: 88:153139

TITLE: Relation of chemical structure with activation energy

AUTHOR(S): of the failure process of oriented polyarylenimides

Korzhavin, L. M.; Prokopcuk, M. R.; Florinskii, F.

S.; Zhukova, T. I.; Dubnova, A. M.; Frenkel, S. Ya.

INAT. Vysokomol. Soedin., Leningrad, USSR

SOURCE: Vysokomolekulyarnye Soedineniya, Seriya B: Kratkie

Soobshcheniya (1978), 20(2), 136-9

CODEN: VYSBAI; ISSN: 0507-5483

DOCUMENT TYPE: Journal

LANGUAGE: Russian

IT 53938-98-0 53938-99-1

RL: PRP (Properties)

(strength of, determination of, activation energy of mech. failure

for)

RN 53938-98-0 CAPLUS

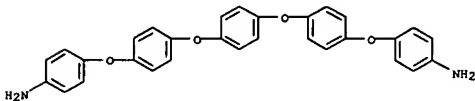
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with

4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA

INDEX NAME)

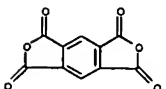
CM 1

CRN 53563-78-3  
CMF C30 H24 N2 O4



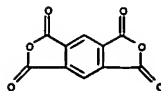
CM 2

CRN 89-32-7  
CMF C10 H2 O6



RN 53938-99-1 CAPLUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with

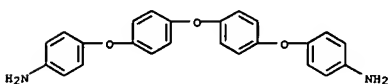
L42 ANSWER 199 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



L42 ANSWER 200 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)  
4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

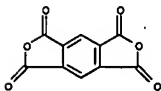
CM 1

CRN 13080-88-1  
CMF C24 H20 N2 O3



CM 2

CRN 89-32-7  
CMF C10 H2 O6

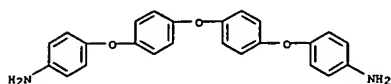


L42 ANSWER 201 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB Glass-transition temps. were calculated and melting temps. (Tm) were calculated and determined exptl. for 8 polyimides of different structure. The higher Tm were associated with rodlike polyimides p-phenylenediamine-pyromellitic dianhydride copolymer [25038-82-8] [Tm(calculated) = 1300 K] and benzidine-pyromellitic dianhydride copolymer [25668-07-9] [Tm(calculated) = 1130 K, Tm(exptl.) = 1100 K]. The Tm of polyimides is determined by the entropy of melting, and mobility of the rings constitutes the main contribution to the latter.

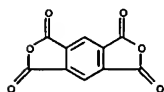
ACCESSION NUMBER: 1978:137081 CAPIUS  
 DOCUMENT NUMBER: 88:137081  
 TITLE: Transition temperatures of aromatic polyimides and physical principles of their chemical classification  
 AUTHOR(S): Bessonov, M. I.; Kusnetsov, N. P.; Koton, M. M.  
 CORPORATE SOURCE: Inst. Vysokomol. Soedin., Leningrad, USSR  
 SOURCE: Vysokomolekulyarnye Soedineniya, Seriya A (1978), 20(2), 347-54  
 CODEN: VYSAAF; ISSN: 0507-5475

DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 IT 53938-99-1  
 RL: USES (Uses)  
 (glass-transition temperature and m.p. of, calcn. of)  
 RN 53938-99-1 CAPIUS  
 CM 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3



CM 2  
 CRN 89-32-7  
 CMF C10 H2 O6



L42 ANSWER 202 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB Polyurea resins containing polyphenylene ether blocks were melt stable at 2400°, and were flexible, transparent, and processable, and had low flammability, and were useful as molding compns. and powder coatings. Thus, p,p'-bis(4-aminophenoxy)diphenylether (I) [13080-88-1] was prepared by treating oxydiphenol [30496-84-5] with p-chloronitrobenzene [100-00-5] in the presence of NaOH and Cu powder to give p,p'-bis(4-nitrophenoxy) di-Ph ether [31532-42-4] which was reduced to I with Sn in concentrated HCl. I (3.8 g) and 1.74 g TDI in 100 mL DMF were stirred 8 h at room temperature to give a tan copolymer [65916-30-5] having inherent viscosity 0.52 dl/g (1% in DMF) and m.p. 290-303°. Thermogravimetric anal. showed a weight loss of 5% in air at 360°. The copolymer was melt extruded at <340° and compression molded into a film at 280° at 15,000 psi.

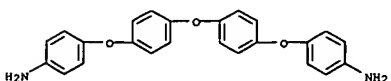
ACCESSION NUMBER: 1978:122122 CAPIUS  
 DOCUMENT NUMBER: 88:122122  
 TITLE: High temperature polyurea resins  
 INVENTOR(S): Stackman, Robert W.; Conciatori, Anthony B.  
 PATENT ASSIGNEE(S): Celanese Corp., USA  
 SOURCE: U.S., 4 pp.  
 CODEN: USXXAM

DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4064107	A	19771220	US 1976-713723	19760812
CA 1107440	A1	19810818	CA 1977-263140	19770720
NL 7708269	A	19780214	NL 1977-8269	19770726
JP 53022593	A2	19780302	JP 1977-89882	19770728
JP 60052169	B4	19851118		
DE 2734200	A1	19780216	DE 1977-2734200	19770729
GB 1591325	A	19810617	GB 1977-32546	19770803
FR 2361443	A1	19780310	FR 1977-24532	19770809
BE 857744	A1	19780213	BE 1977-180129	19770812
			US 1976-713723	A 19760812

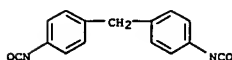
PRIORITY APPLN. INFO.:  
 IT 65718-72-1 65916-30-5  
 RL: USES (Uses)  
 (block, heat-resistant, soluble)  
 RN 65718-72-1 CAPIUS  
 CM Benzenamine, 4,4'-[oxybis(4,1-phenyleneoxy)]bis-, polymer with 1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX NAME)

CM 1  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3



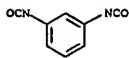
L42 ANSWER 201 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)

CM 2  
 CRN 101-68-8  
 CMF C15 H10 N2 O2

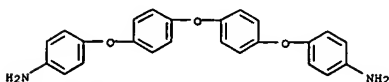


RN 65916-30-5 CAPIUS  
 CM Benzenamine, 4,4'-[oxybis(4,1-phenyleneoxy)]bis-, polymer with 1,3-diisocyanatomethylbenzene (9CI) (CA INDEX NAME)

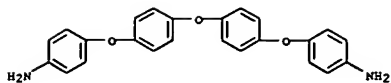
CM 1  
 CRN 26471-62-5  
 CMF C9 H6 N2 O2  
 CCI IDS



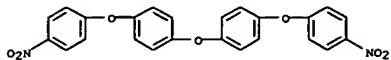
D1-Me  
 CM 2  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3



IT 13080-88-1P  
 RL: PREP (Preparation)  
 (preparation of)  
 RN 13080-88-1 CAPIUS  
 CM Benzenamine, 4,4'-[oxybis(4,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)



IT 51532-42-4  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reduction of)  
 RN 51532-42-4 CAPLUS  
 CN Benzene, 1,1'-oxybis[4-(4-nitrophenoxy)-] (9CI) (CA INDEX NAME)

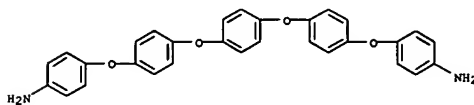


AB Strength and elastic properties of poly(heteroaryleneimines) are determined by the degree of coiling of the polymer chains in condensed state which in turn depends on the packing d. and intermol. interaction of the adjacent chains. Conformation parameter which is a measure of the coiling of the polymer chain and which considers the configurational polydispersity of the macromol. is used for prediction of the mech. properties of poly(heteroaryleneimines) in a broad temperature range. Thermomech. properties

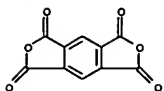
of polyimide fibers of different chemical structure were given.  
 ACCESSION NUMBER: 1978:106646 CAPLUS  
 DOCUMENT NUMBER: 88:106646  
 TITLE: Correlation of the configuration of chains, structure and thermomechanical properties of fibers of some poly(heteroaryleneimines)  
 AUTHOR(S): Korzhavin, L. N.; Baklagina, Yu. G.; Sidorovich, A. V.; Birahtein, T. M.; Koton, M. M.  
 CORPORATE SOURCE: Inst. Macromol. Compd., Leningrad, USSR  
 SOURCE: Prepr. - Mezhdunar. Simp. Khim. Voloknam, 2nd (1977), Volume 1, 117-25. Program. Kom. Mezhdunar. Simp. Khim. Voloknam: Kalinin, USSR.  
 CODEN: 37KQAK  
 CONFERENCE: Russian

DOCUMENT TYPE: Russian  
 LANGUAGE: Russian  
 IT 53938-98-0 53938-99-1  
 RL: USES (Uses)  
 (fibers, thermomech. properties of)  
 RN 53938-98-0 CAPLUS  
 CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1  
 CRN 53563-78-3  
 CMF C30 H24 N2 O4

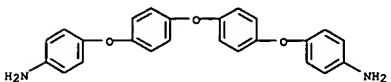


CM 2  
 CRN 89-32-7  
 CMF C10 H2 O6

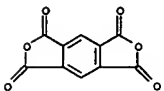


RN 53938-99-1 CAPLUS  
 CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3



CM 2  
 CRN 89-32-7  
 CMF C10 H2 O6



AB Quasicryst. structure was detected by polarization microscopy in films of crystallizing and noncrystg. polyamic acids, polyether-polyamic acids, polyester-polyamic acids, and polyamide-polyimides cast from DMF solns. and subjected to thermal treatment. The birefringence of the samples exceeded that of other polymers by 1 order of magnitude, and it increased with increasing temperature. Calorimetric determination indicated the absence of pronounced heat effects during crystallization of samples with quasicryst. structure.

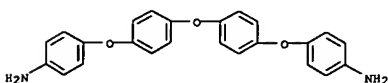
ACCESSION NUMBER: 1978:23545 CAPLUS  
 DOCUMENT NUMBER: 88:23545  
 TITLE: Quasicrystalline state of aromatic heterocyclic polymers with imide rings  
 AUTHOR(S): Sidorovich, A. V.; Kenarov, A. V.; Strunnikov, A. Yu.;

Stadnik, V. P.  
 CORPORATE SOURCE: Inst. Vysokomol. Soedin., Leningrad, USSR  
 SOURCE: Doklady Akademii Nauk SSSR (1977), 237(1), 156-9 [Phys. Chem.]  
 CODEN: DANKAS; ISSN: 0002-3264

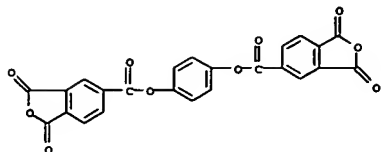
DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 IT 53563-77-2 53563-79-4  
 RL: FRP (Properties)  
 (quasicryst. structure of)

RN 53563-77-2 CAPLUS  
 CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

CM 1  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3



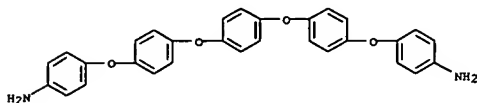
CM 2  
 CRN 2770-49-2  
 CMF C24 H10 O10



RN 53563-79-4 CAPIUS  
 CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

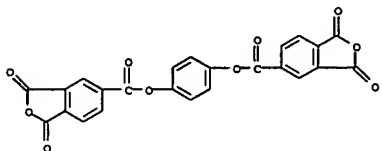
CM 1

CRN 53563-78-3  
 CMF C30 H24 N2 O4



CM 2

CRN 2770-49-2  
 CMF C24 H10 O10



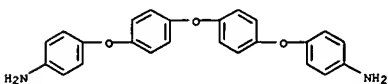
L42 ANSWER 206 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB The small- and large-angle X-ray diffraction was used for determination of the supermol. structure of unoriented aromatic polyimide films. The large-angle X-ray diffraction confirmed an amorphous structure of the polymers on heating. The intensity of diffraction increased and the reflexes shifted to the direction of small angles on increasing the temperature of the polyimides, and the effect was not related to the order of reflexes of the periodically repeating monomer units.

ACCESSION NUMBER: 1977:536552 CAPIUS  
 DOCUMENT NUMBER: 87:136552  
 TITLE: Supramolecular structure of unoriented polyarimides  
 AUTHOR(S): Efanova, N. V.; Sidorovich, A. V.  
 CORPORATE SOURCE: Inst. Vysokomol. Soedin., Leningrad, USSR  
 SOURCE: Vysokomolekulyarnye Soedineniya, Seriya B: Kratkie Soobshcheniya (1977), 19(8), 611-12  
 CODEN: VYSBAI; ISSN: 0507-5483

DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 IT 53938-99-1  
 RL: USES (Uses)  
 (film, morphol. of, X-ray diffraction in relation to)  
 RN 53938-99-1 CAPIUS  
 CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

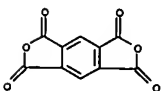
CM 1

CRN 13080-88-1  
 CMF C24 H20 N2 O3



CM 2

CRN 89-32-7  
 CMF C10 H2 O6



L42 ANSWER 205 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB Spectroscopy (IR) indicated that the effect of strength of polyimide macromols. incorporating complex dianhydride fragments in alternating chain units exceeds that of flexible macromols. by 1.5-2 times, indicating considerable reserve strength in the former.

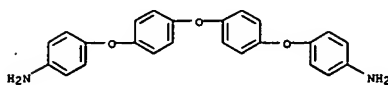
ACCESSION NUMBER: 1977:552641 CAPIUS  
 DOCUMENT NUMBER: 87:152641  
 TITLE: The strength of polyimide macromolecules  
 AUTHOR(S): Vettegren, V. I.; Prokopchuk, N. R.; Korchavin, L. N.; Frenkel, S. Ya.; Koton, M. M.; Fridlyand, K. Yu.  
 CORPORATE SOURCE: A. F. Ioffe Phys. Tech. Inst., Leningrad, USSR  
 SOURCE: Faserforschung und Textiltechnik (1977), 28(7), 335-8  
 CODEN: FSTKA7; ISSN: 0014-8628  
 DOCUMENT TYPE: Journal  
 LANGUAGE: German

IT 53938-99-1  
 RL: AMT (Analyte); ANST (Analytical study)  
 (strength determination of, by IR spectroscopy)

RN 53938-99-1 CAPIUS  
 CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

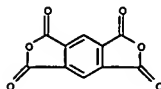
CM 1

CRN 13080-88-1  
 CMF C24 H20 N2 O3

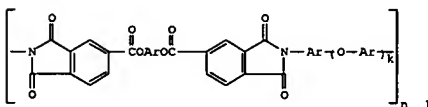


CM 2

CRN 89-32-7  
 CMF C10 H2 O6



L42 ANSWER 207 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 GI



AB The process of orientation and crystallization was studied for the poly(ester-imides) 1 (k = 3, 4) by IR, dilatometry, and X-ray anal. The self-orientation effect on heating I films was not caused by the presence of solvent, rather by a conformational transition in the macromols. The appearance of axial texture during the crystallization of the nonoriented poly(ester-imide) films led to decreased intensity of the imide absorption band. This can be used as a qual. indication of the degree of imidization.

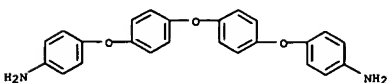
ACCESSION NUMBER: 1977:440127 CAPIUS  
 DOCUMENT NUMBER: 87:40127  
 TITLE: Study of the phase-aggregate state and structure of some poly(ester imides)  
 AUTHOR(S): Mikhailova, M. V.; Nikitin, V. N.; Sidorovich, A. V.; Adrova, N. A.; Baklagina, Yu. G.; Dubnova, A. M.; Efanova, N. V.  
 CORPORATE SOURCE: Inst. Vysokomol. Soedin., Leningrad, USSR  
 SOURCE: Vysokomolekulyarnye Soedineniya, Seriya A (1977), 19(5), 1030-6  
 CODEN: VYSAAF; ISSN: 0507-5475

DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 IT 53563-77-2 53563-79-4  
 RL: USES (Uses)  
 (cyclized, orientation and crystallization of, self-orientation effect and imidization degree determination in)

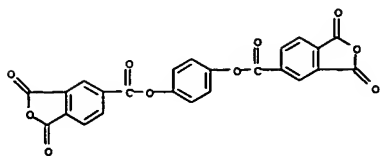
RN 53563-77-2 CAPIUS  
 CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 13080-88-1  
 CMF C24 H20 N2 O3



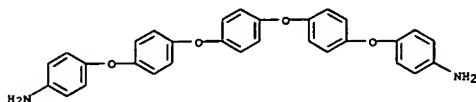
CM 2

CRN 2770-49-2  
CMF C24 H10 O10

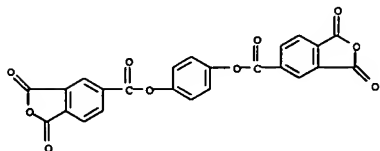
RN 53563-79-4 CAPIUS

CM 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 4,4'-(1,4-phenylenebis(oxy-4,1-phenyleneoxy))bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 53563-78-3  
CMF C30 H24 N2 O4

CM 2

CRN 2770-49-2  
CMF C24 H10 O10

L42 ANSWER 208 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN

AB Thermal stability of oriented polypyromellitimide fibers differing in the structure of the chain fragment is determined under the conditions of thermal

and oxidative thermal degradation using a simultaneous and mass-spectrometric anal. Pyromellitic dianhydride-terphenyldiamine copolymer [55879-29-3], 4,4'-(m-phenylenedioxy)dianiline-pyromellitic dianhydride copolymer [43198-23-8] and benzidine-pyromellitic dianhydride copolymer [25668-07-9]

had a high degradation temperature and a high stability at temperature &gt;400° in air and He. The temperature characteristics of the examined fibers depended on the gas in which the thermal anal. was performed. Thermal stability of examined fibers was higher in air and He than in vacuum as the medium. The highest effect of the gaseous medium was observed in calcns. of the activation energy of oxidative thermal degradation of oriented fibers, which was higher in air than in He and vacuum.

ACCESSION NUMBER: 1977:156878 CAPIUS

DOCUMENT NUMBER: 86:156878

TITLE: Thermal and oxidative thermal degradation of polyimide

AUTHOR(S): fibers  
Sekei, T.; Koton, M. M.; Sazanov, Yu. N.; Prokopchuk, N. R.; Korzhavin, L. N.

CORPORATE SOURCE: USSR

SOURCE: Khimicheskie Volokna (1977), (1), 25-7

CODEN: KVLKA4; ISSN: 0023-1118

DOCUMENT TYPE: Journal

LANGUAGE: Russian

IT 53938-98-0

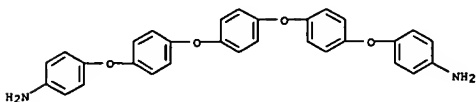
RL: USES (Uses)

(fiber, thermal and oxidative thermal degradation of, reaction medium effect on)

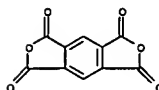
RN 53938-98-0 CAPIUS

CM 1H, 3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-(1,4-phenylenebis(oxy-4,1-phenyleneoxy))bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

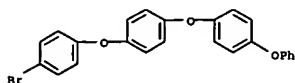
CRN 53563-78-3  
CMF C30 H24 N2 O4

CM 2

CRN 89-32-7  
CMF C10 H2 O6

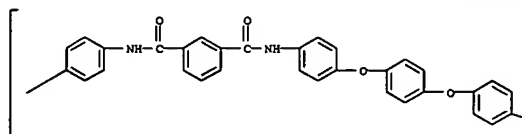
L42 ANSWER 208 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)

L42 ANSWER 209 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB P-Ph(OC6H4)nBr (n = 2, 3) were prepared by treating p-RC6H4OK (R = H, PhO) with excess (p-BrC6H4)2O at 200-10° in the presence of powdered Cu.  
 ACCESSION NUMBER: 1977:155306 CAPLUS  
 DOCUMENT NUMBER: 86:155306  
 TITLE: Synthesis of p-bromopoly(phenylene oxides)  
 AUTHOR(S): Sinitsin, V. V.; Bulatov, M. A.  
 CORPORATE SOURCE: Inst. Khim., Sverdlovsk, USSR  
 SOURCE: Deposited Doc. (1973), VINITI 6906-73, 9 pp. Avail.: BLLD  
 DOCUMENT TYPE: Report  
 LANGUAGE: Russian  
 IT 41318-74-5P  
 RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)  
 RN 41318-74-5 CAPLUS  
 CN Benzene, 1-(4-bromophenoxy)-4-(4-phenoxyphenoxy)- (9CI) (CA INDEX NAME)



L42 ANSWER 210 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB Polyamides containing in the main chain p-oxyphenylene groups of different lengths are prepared from terephthaloyl and isophthaloyl chlorides and the corresponding diamines and their thermal stability does not change with increasing number of the oxyphenylene groups, and is generally higher for polyterephthalamides than for polyisophthalamides. Polyamides were prepared by low temperature-polymerization in AcNMe2. Polyisophthalamides were soluble in amide solvents and polyterephthalamides only in H2SO4. An increase in the number of oxyphenylene groups in polyterephthalamides increased their solubility  
 ACCESSION NUMBER: 1977:107079 CAPLUS  
 DOCUMENT NUMBER: 86:107079  
 TITLE: Synthesis and study of polyamides with different numbers of p-oxyphenylene groups in the main chain  
 AUTHOR(S): Dubnova, A. M.; Koton, M. M.; Nekrasova, E. M.  
 CORPORATE SOURCE: Inst. Vysokomol. Soedin., Leningrad, USSR  
 SOURCE: Vysokomolekulyarnye Soedineniya, Seriya B: Kratkie Soobshcheniya (1977), 19(1), 39-40  
 CODEN: VYSBAI; ISSN: 0507-3483  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 IT 26913-01-9P 62174-26-9P 62174-28-1P  
 62174-29-2P 62174-33-8P 62174-34-9P  
 62174-36-1P 62174-37-2P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation and properties of)  
 RN 26913-01-9 CAPLUS  
 CN Poly(oxy-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenyleneiminocarbonyl-1,3-phenylenecarbonylimino-1,4-phenylene) (9CI) (CA INDEX NAME)

PAGE 1-A



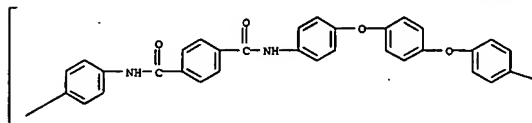
L42 ANSWER 210 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

PAGE 1-B

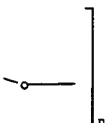


RN 62174-26-9 CAPLUS  
 CN Poly(oxy-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenyleneiminocarbonyl-1,4-phenylenecarbonylimino-1,4-phenylene) (9CI) (CA INDEX NAME)

PAGE 1-A



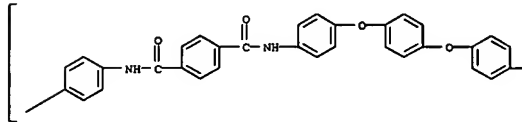
PAGE 1-B



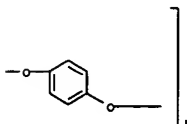
RN 62174-28-1 CAPLUS  
 CN Poly(oxy-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenyleneiminocarbonyl-1,4-phenylenecarbonylimino-1,4-phenylene) (9CI) (CA INDEX NAME)

L42 ANSWER 210 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

PAGE 1-A

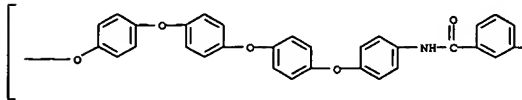


PAGE 1-B

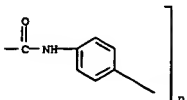


RN 62174-29-2 CAPLUS  
 CN Poly(oxy-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenyleneiminocarbonyl-1,3-phenylenecarbonylimino-1,4-phenylene) (9CI) (CA INDEX NAME)

PAGE 1-A



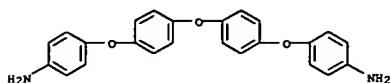
PAGE 1-B



RN 62174-33-8 CAPLUS  
 CN 1,4-Benzenedicarbonyl dichloride, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

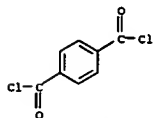
L42 ANSWER 210 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)  
CM 1

CRN 13080-88-1  
CMF C24 H20 N2 O3



CM 2

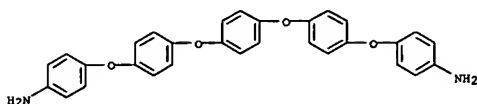
CRN 100-20-9  
CMF C8 H4 Cl2 O2



RN 62174-34-9 CAPLUS  
CM 1,4-Benzenedicarbonyl dichloride, polymer with  
4,4'-[1,4-phenylenebis(oxy-  
4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

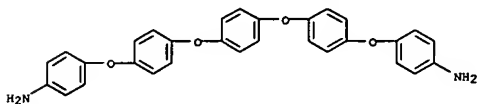
CRN 53563-78-3  
CMF C30 H24 N2 O4



CM 2

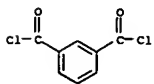
CRN 100-20-9  
CMF C8 H4 Cl2 O2

L42 ANSWER 210 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

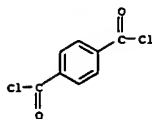


CM 2

CRN 99-63-8  
CMF C8 H4 Cl2 O2



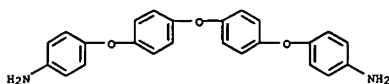
L42 ANSWER 210 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 62174-36-1 CAPLUS  
CM 1,3-Benzenedicarbonyl dichloride, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

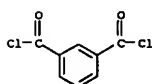
CM 1

CRN 13080-88-1  
CMF C24 H20 N2 O3



CM 2

CRN 99-63-8  
CMF C8 H4 Cl2 O2

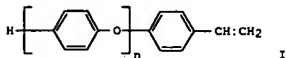


RN 62174-37-2 CAPLUS  
CM 1,3-Benzenedicarbonyl dichloride, polymer with  
4,4'-[1,4-phenylenebis(oxy-  
4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 53563-78-3  
CMF C30 H24 N2 O4

L42 ANSWER 211 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
GI



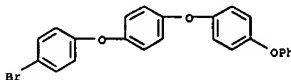
AB Styrene-containing phenylene oxides (I, n = 2,3), proposed as monomers  
for

heat-resistant polymers, were prepared by catalytic dehydration of the corresponding carbinols. The carbinols were obtained via Grignard treatment of the p-bromophenylene oxides. The formation of dimeric byproducts was minimized by treating the carbinols in Ar at low temps. The I were white crystalline products and soluble in organic solvents.

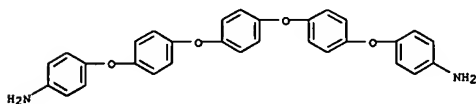
ACCESSION NUMBER: 1977:107062 CAPLUS  
DOCUMENT NUMBER: 86:107062  
TITLE: Synthesis of p-vinylpoly(phenylene oxides)  
AUTHOR(S): Sinitayn, V. V.; Bulatov, M. A.; Sinitayn, T. A.  
CORPORATE SOURCE: Inst. Khim., Sverdlovsk, USSR  
SOURCE: Deposited Doc. (1974), VINITI 926-74, 9 pp. Avail.:  
BLD  
DOCUMENT TYPE: Report  
LANGUAGE: Russian

IT 41318-74-5  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(Grignard reaction of, in preparation of methylcarbinols)

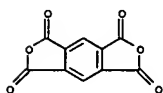
RN 41318-74-5 CAPLUS  
CM Benzene, 1-(4-bromophenoxy)-4-(4-phenoxyphenoxy)- (9CI) (CA INDEX NAME)



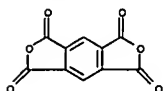
L42 ANSWER 212 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB Parameters of the unit cell, elasticity modulus of crystal lattice along the chain axis and the force required for 1% elongation of mols. are determined for various polyimides, and data of large-angle x-ray diffraction agree well with published data.  
 ACCESSION NUMBER: 1977:73267 CAPIUS  
 DOCUMENT NUMBER: 86:73267  
 TITLE: Moduli of elasticity of crystal lattices of polyimides and elasticity of polyimide chains  
 AUTHOR(S): Ginzburg, B. M.; Magdalev, E. T.; Volosatov, V. N.; Prokopchuk, N. R.; Frenkel, S. Ya.  
 CORPORATE SOURCE: Inst. Vysokomol. Soedin., Leningrad, USSR  
 SOURCE: Vysokomolekulyarnye Soedineniya, Seriya B: Kratkie Soobshcheniya (1976), 18(12), 918-22  
 CODEN: VYSBAI; ISSN: 0507-5483  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 IT 53938-98-0  
 RL: PRP (Properties) (chain flexibility and crystal lattice elasticity of)  
 RN 53938-98-0 CAPIUS  
 CM 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-(1,4-phenylenebis(oxy-4,1-phenyleneoxy))bis(benzenamine) (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 53563-78-3  
 CMF C30 H24 N2 O4



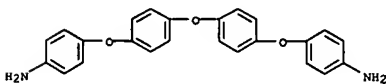
CM 2  
 CRN 89-32-7  
 CMF C10 H2 O6



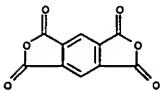
L42 ANSWER 213 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)



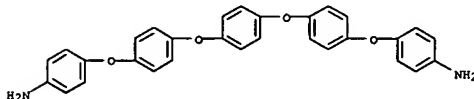
RN 53938-99-1 CAPIUS  
 CM 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-(oxybis(4,1-phenyleneoxy))bis(benzenamine) (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3



CM 2  
 CRN 89-32-7  
 CMF C10 H2 O6

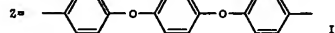
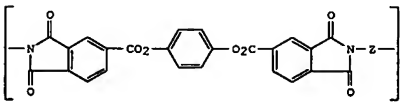
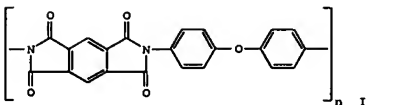


L42 ANSWER 213 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB Mech. and thermomech. properties of polypyromellitimide fibers are significantly improved by the selection of optimum chain configuration and the corresponding processing conditions. Chemical structure of the repeating units, macromol. configuration, conformational order, packing d., and supermol. structure affect the thermomech. properties of oriented polyimide fibers containing pyromellitic dianhydride and various diamines. All examined polyimides had approx. the same activation energy of thermal degradation. The number of oxyphenylene groups in the diamine component of the crystalline polyimides affected the thermomech. properties of the fibers significantly. Polyimides with extended conformation of the chain and an ordered structure give fibers with high mech. strength and thermal stability.  
 ACCESSION NUMBER: 1977:56619 CAPIUS  
 DOCUMENT NUMBER: 86:56619  
 TITLE: Thermomechanical properties of polypyromellitimide fibers  
 AUTHOR(S): Prokopchuk, N. R.; Bessonov, M. I.; Korzhavin, L. N.; Baklagina, Yu. G.; Kuznetsov, N. P.; Frenkel, S. Ya.  
 CORPORATE SOURCE: Khimicheskie Volokna (1976), (6), 44-8  
 SOURCE: Khimicheskie Volokna (1976), (6), 44-8  
 CODEN: KVLK44; ISSN: 0023-1118  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 IT 53938-98-0 53938-99-1  
 RL: USES (Uses) (fibers, thermomech. properties of)  
 RN 53938-98-0 CAPIUS  
 CM 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-(1,4-phenylenebis(oxy-4,1-phenyleneoxy))bis(benzenamine) (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 53563-78-3  
 CMF C30 H24 N2 O4



CM 2  
 CRN 89-32-7  
 CMF C10 H2 O6

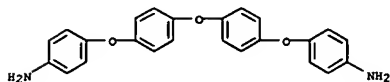
L42 ANSWER 214 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 GI



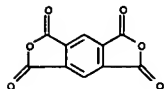
AB Strength of the ideal crystalline polymer lattice was determined from the shift in the IR frequencies of macromols. subjected to tensile stress, and the limiting values of the former (Ef) were compared with the tensile strength (σf) of the corresponding samples. The investigated compds. included polypyromellitimides, polyamides (e.g., polycaprolactam [25038-54-4]), and flexible-chain polymers (e.g., polyacrylonitrile [25014-41-9]). Polyamides, flexible-chain polymers, and simple polypyromellitimides [e.g., 4,4'-oxybis(aniline-pyromellitic dianhydride copolymer (I) [25038-81-7]] had similar Ef ranging from 800 to 2000 kg/mm<sup>2</sup>. Higher Ef (≥4000 kg/mm<sup>2</sup>) were observed in complex polypyromellitimides [e.g., hydroquinone-4,4'-(p-phenylenedioxy)bis(aniline-trimellitic acid copolymer (II) [61488-51-5]]]. The Ef were 7-94 times higher than the corresponding σf.  
 ACCESSION NUMBER: 1977:55795 CAPIUS  
 DOCUMENT NUMBER: 86:55795  
 TITLE: Strength of macromolecules of poly(heteroarylenes) containing imide rings in the main chain  
 AUTHOR(S): Vettegren, V. I.; Prokopchuk, N. R.; Korzhavin, L. N.; Frenkel, S. Ya.; Koton, M. M.  
 CORPORATE SOURCE: Fiz.-Tekh. Inst. im. Lofte, Leningrad, USSR  
 SOURCE: Doklady Akademii Nauk SSSR (1976), 230(6), 1343-6 [Chem.]  
 CODEN: DANKAS; ISSN: 0002-3264  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 IT 53938-99-1  
 RL: PRP (Properties)



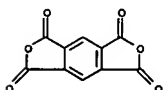
L42 ANSWER 214 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)  
 (mol. and tensile strength of)  
 RN 53938-99-1 CAPIUS  
 CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with  
 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)  
 CH 1  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3



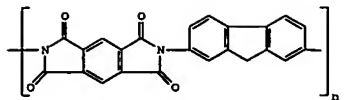
CH 2  
 CRN 89-32-7  
 CMF C10 H2 O6



L42 ANSWER 215 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)  
 CH 2  
 CRN 89-32-7  
 CMF C10 H2 O6

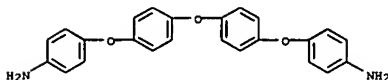


L42 ANSWER 215 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 GI



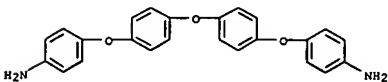
AB Thermal stability of polyimide fibers containing pyromellitic acid  
 derivs. and  
 aromatic diamines depended on their mol. structure and was highest for  
 polyimide (I) [33775-20-1]. The heat resistance of polyimides increased  
 with increasing symmetry of the diamine component. Thermal gravimetric  
 data showed the significant difference in the initial decomposition  
 temperature of  
 polyimides with changes in the diamine component. The mass-spectroscopic  
 curves showed peaks related to gaseous products at temps. 400-600'.  
 An intense formation of H accompanied in some cases with HCN, observed at  
 550-800', was related to the formation of 3-dimensional structures  
 with 50-70% C-containing residue.  
 ACCESSION NUMBER: 1976:561685 CAPIUS  
 DOCUMENT NUMBER: 85:161685  
 TITLE: Thermal decomposition of polyimide fibers  
 AUTHOR(S): Sekel, T.; Till, F.; Koton, M. M.; Korzhavin, L. N.;  
 Sazanov, Yu. N.  
 CORPORATE SOURCE: Bulg.  
 SOURCE: Polikondens. Protsessy, Tr. Mezhdunar. Simp., 5th  
 (1976), Meeting Date 1975, 147-55. Editor(s):  
 Borisov, G.; Silviev, Kh.; Shenkov, S. Izd. BAN:  
 Sofia, Bulg.  
 CODEN: 33UUAJ  
 CONFERENCE  
 DOCUMENT TYPE: Conference  
 LANGUAGE: Russian

IT 53938-99-1  
 RL: USES (Uses)  
 (fibers, thermal stability of)  
 RN 53938-99-1 CAPIUS  
 CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with  
 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)  
 CH 1  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3

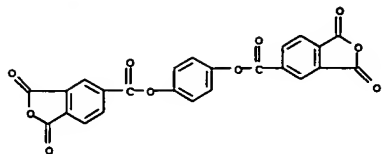


L42 ANSWER 216 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 GI For diagram(s), see printed CA Issue.  
 AB Heat treatment of the poly(ester imide) I [53564-22-0] at >200° led  
 to crystallization and consequent changes in the thermomech. properties.  
 Increasing the degree of crystallization broadened the temperature  
 region for the mech.  
 processing of I, but this pos. effect was limited by the accompanying  
 increase in brittleness and decrease in breaking elongation at normal  
 temps. To obtain sufficiently elastic films, the heat treatment should  
 be  
 terminated at temps. 10-20° above the softening temperature, which gives  
 a degree of crystallinity ≤50%. Softening in I was observed at  
 230-440°.  
 ACCESSION NUMBER: 1976:494787 CAPIUS  
 DOCUMENT NUMBER: 85:94787  
 TITLE: Study of strength and thermomechanical properties of  
 poly(ester imides) at different stages of heat  
 treatment and crystallization  
 AUTHOR(S): Kuznetsov, N. P.; Sidorovich, A. V.; Adrova, N. A.;  
 Bessonov, M. I.; Dubnova, A. M.; Koton, M. M.  
 CORPORATE SOURCE: Inst. Vysokomol. Soedin., Leningrad, USSR  
 SOURCE: Vysokomolekulyarnye Soedineniya, Seriya B: Kratkie  
 Soobshcheniya (1976), 18(6), 403-6  
 CODEN: VYSBAI; ISSN: 0507-5483  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 IT 53563-77-2  
 RL: PROC (Process)  
 (crystallization of, by heat treatment, thermomech. properties in  
 relation to)  
 RN 53563-77-2 CAPIUS  
 CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene  
 ester, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI)  
 (CA INDEX NAME)

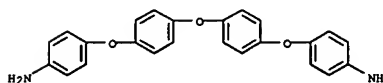
CH 1  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3



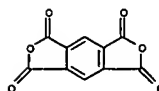
CH 2  
 CRN 2770-49-2  
 CMF C24 H10 O10



L42 ANSWER 217 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB Crystal structure of 4,4'-[oxybis(p-phenyleneoxy)]dianiline-pyromellitic dianhydride copolymer [53938-99-1] and benzidine-pyromellitic dianhydride copolymer [25668-07-9] is determined on highly oriented fibers and a rhombic form of the unit cell is obtained from x-ray diffractograms for both polymers.  
 ACCESSION NUMBER: 1976:463473 CAPIUS  
 DOCUMENT NUMBER: 85:63473  
 TITLE: Crystal lattices of some new polyimides  
 AUTHOR(S): Magdalev, E. T.; Ginzburg, B. M.; Volosatov, V. N.; Martynov, M. A.; Frenkel, S. Ya.  
 CORPORATE SOURCE: Inst. Vysokomol. Soedin., Leningrad, USSR  
 SOURCE: Vysokomolekulyarnye Soedineniya, Seriya B: Kratkie Soobshcheniya (1976), 18(5), 306-7  
 CODEN: VYSSAI; ISSN: 0507-5483  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 IT 53938-99-1  
 RL: PRP (Properties)  
 (crystal structure of, in oriented fibers)  
 RN 53938-99-1 CAPIUS  
 CH 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 13080-88-1  
 CMF C24 H20 N2 O3



CM 2  
 CRN 89-32-7  
 CMF C10 H2 O6



L42 ANSWER 218 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN  
 AB Polyamides soluble in organic solvents are prepared by treating diamines with

tetracarboxylic acids and/or their deriva. at 280°. Thus, a mixture of 4,4'-di(m-aminophenoxy)diphenyl sulfone 4.32, 3,3',4,4'-benzophenonetetracarboxylic acid dianhydride 3.22, cresol 60, and xylene 10 g was stirred under N at 100°, and heated 5 hr at 140°. The resulting polymer [58982-44-8] soln was coated on a glass plate and dried at 80° to give a heat-resistant film.

ACCESSION NUMBER: 1976:165552 CAPIUS  
 DOCUMENT NUMBER: 84:165552  
 TITLE: Polyamides soluble in organic solvents  
 INVENTOR(S): Miyadera, Yasuo  
 PATENT ASSIGNEE(S): Hitachi, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.  
 CODEN: JIQQAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

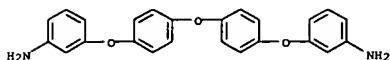
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 51002798	A2	19760110	JP 1974-73345	19740628
JP 52030319	B4	19770806		

PRIORITY APPLN. INFO.: JP 1974-73345 A 19740628

IT 58883-56-0  
 RL: USES (Uses)  
 (soluble, in organic solvents)  
 RN 58883-56-0 CAPIUS  
 CH 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with 3,3'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

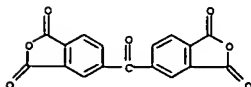
CM 1

CRN 58883-55-9  
 CMF C24 H20 N2 O3



CM 2

CRN 2421-28-5  
 CMF C17 H6 O7



L42 ANSWER 219 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB Mech. properties of polypyromellitimide fibers depend on the capability  
 of the macromols. to form ordered structures. Polyimide fibers having low  
 elastic modulus do not crystallize in heat treatment. To achieve an  
 ordered structure in the fiber, the form and the lateral dimension of the  
 diamide and dianhydride constituted chains are significant factors. The  
 initiators of intermol. packing in the macromols. of these fibers are the  
 pyromellitimide fragments.

ACCESSION NUMBER: 1976:152002 CAPLUS  
 DOCUMENT NUMBER: 84:152002  
 TITLE: Correlation of chain configurations, structure, and  
 mechanical properties of fibers of

polypyromellitimide

AUTHOR(S): series  
 Kozhavin, L. N.; Prokopchuk, M. R.; Baklagina, Yu.  
 G.; Florinskii, F. S.; Efanova, N. V.; Dubnova, A.  
 M.;

CORPORATE SOURCE: Frenkel, S. Ya.; Koton, M. M.  
 SOURCE: Inst. Vysokomol. Soedin., Leningrad, USSR  
 Vysokomolekulyarnye Soedineniya, Seriya A (1976),  
 18(3), 707-12  
 CODEN: VYSAAF; ISSN: 0507-5475

DOCUMENT TYPE: Journal  
 LANGUAGE: Russian

IT 53938-98-0 53938-99-1

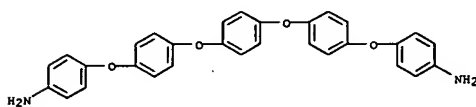
RL: USES (Uses)  
 (fiber, mech. properties of)

RN 53938-98-0 CAPLUS

CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with  
 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA  
 INDEX NAME)

CH 1

CRN 53563-78-3  
 CMF C30 H24 N2 O4



CH 2

CRN 89-32-7  
 CMF C10 H2 O6

L42 ANSWER 220 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
 GI For diagram(s), see printed CA issue.  
 AB The hydrolysis rate consts. in 0.5N NaOH at 90° were determined for 15  
 aromatic polyimides, poly(ester imides), and poly(amide imides) [I, Z =

III  
 (m = 1, 2, 4), IV-VII; II, Z = III (m = 1-4), IV-VII]; the highest  
 hydrolytic stability had polyimide [53938-98-0] I (Z = III, m =  
 4). Hydrolytic stability was decreased by introduction of amide groups  
 into polymer chains. Polymers having amide groups between aromatic rings  
 (IV, V) were more stable than those with amide groups directly bonded to  
 imide rings (VI, VII). Polymers containing m-phenylene units (V) were

less stable than those containing the p-phenylene one (IV), apparently due to  
 less dense packing. Treatment with 0.5N NaOH decreased the tensile strength  
 and especially elongation of the investigated representative samples.

ACCESSION NUMBER: 1975:479903 CAPLUS  
 DOCUMENT NUMBER: 83:79903  
 TITLE: Hydrolytic stability of aromatic polyimides and their  
 derivatives

AUTHOR(S): Adrova, N. A.; Koton, M. M.; Prokhorova, L. K.  
 CORPORATE SOURCE: Inst. Vysokomol. Soedin., Leningrad, USSR  
 SOURCE: Vysokomolekulyarnye Soedineniya, Seriya B: Kratkie  
 Soobshcheniya (1975), 17(5), 409-12  
 CODEN: VYSBAI; ISSN: 0507-5483

DOCUMENT TYPE: Journal  
 LANGUAGE: Russian

IT 53563-77-2 53563-78-4 53938-98-0

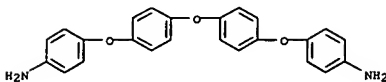
RL: USES (Uses)  
 (hydrolytic stability of)

RN 53563-77-2 CAPLUS

CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene  
 ester, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI)  
 (CA INDEX NAME)

CH 1

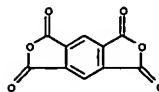
CRN 13080-88-1  
 CMF C24 H20 N2 O3



CH 2

CRN 2770-49-2  
 CMF C24 H10 O10

L42 ANSWER 219 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

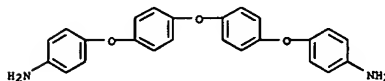


RN 53938-99-1 CAPLUS

CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with  
 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

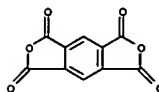
CH 1

CRN 13080-88-1  
 CMF C24 H20 N2 O3

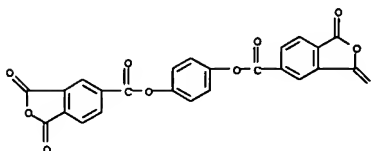


CH 2

CRN 89-32-7  
 CMF C10 H2 O6



L42 ANSWER 220 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

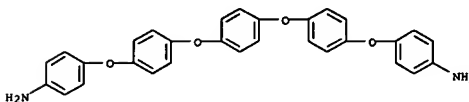


RN 53563-79-4 CAPLUS

CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene  
 ester, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

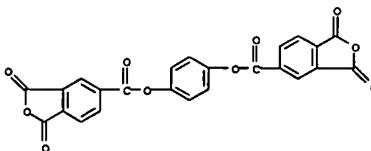
CH 1

CRN 53563-78-3  
 CMF C30 H24 N2 O4



CH 2

CRN 2770-49-2  
 CMF C24 H10 O10



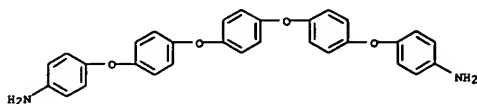
RN 53938-98-0 CAPLUS

CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with  
 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA  
 INDEX NAME)

L42 ANSWER 220 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)

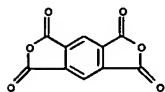
CH 1

CRN 53563-78-3  
CHF C30 H24 N2 O4

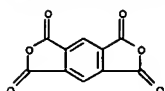


CH 2

CRN 89-32-7  
CHF C10 H2 O6



L42 ANSWER 221 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN (Continued)



L42 ANSWER 221 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN

GI For diagram(s), see printed CA issue.

AB The ability of polyimides obtained from pyromellitic dianhydride (I) to form an ordered structure depended on the structure of the diamine used. I was proposed as the initiator of intermol. chain packing. If the diamine part of the mols. can be contained in the same crystal cell, crystallization occurs. If the diamine has cross-sectional dimensions greater than I, crystallization probably occurs only when the energy of intermol. packing of the diamine fragments is on the same order or greater than the packing energy of I. Physicomech. and crystallization data are given for the polyimides.

II and III (Z = direct bond, p-C6H4, CH2, CO, S, O, OC6H4O, p-OC6H4OC6H4O-p) after heat treatment at 200-450°. The polyimides which did not crystallize gave fibers having the lowest modulus of elasticity.

ACCESSION NUMBER: 1975:443931 CAPIUS

DOCUMENT NUMBER: 83:43931

TITLE: Structure and physicomechanical properties of polymers

AUTHOR(S): prepared from pyromellitic dianhydride Baklagina, Yu. G.; Efanova, M. V.; Prokopchuk, N. R.; Korzhavin, L. N.; Sidorovich, A. V.; Florinskii, F. S.

S.

CORPORATE SOURCE: Inst. Vysokomol. Soedin., Leningrad, USSR  
SOURCE: Doklady Akademii Nauk SSSR (1975), 221(3), 609-12 [Chem]

CODEN: DANKAS; ISSN: 0002-3264

DOCUMENT TYPE: Journal  
LANGUAGE: Russian

IT 53938-99-1

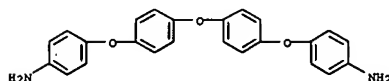
RL: USES (Uses)  
(crystal structure and physicomech. properties of, diamine structure effect on)

RN 53938-99-1 CAPIUS

CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CH 1

CRN 13080-88-1  
CHF C24 H20 N2 O3



CH 2

CRN 89-32-7  
CHF C10 H2 O6

L42 ANSWER 222 OF 231 CAPIUS COPYRIGHT 2005 ACS on STN

GI For diagram(s), see printed CA issue.

AB An increase in the length of oxyphenylene chains in polyimides I and II (m

= 3 or 4) as, e.g., on passing from  $\omega$ -(p-aminophenyl)- $\omega'$ -aminotri(p-oxyphenylene)-pyromellitic dianhydride copolymer (I, m = 3) [53938-99-1] to  $\omega$ -(p-aminophenyl)- $\omega'$ -aminotetra(p-oxyphenylene)-pyromellitic dianhydride copolymer (II, m = 4) [53938-98-0], had virtually no effect on tensile strength,

decreased elongation and m.p., increased elasticity modulus, and did not decrease heat resistance. Apparently due to crosslinking, copolymers I did not have the distinct softening temps. and, after thermal treatment

at

400° reached optimum physicomech. properties and did not soften at all. II (m = 3) and II (m = 4) softened at 215 and 196°, resp. Thermal treatment at 400° had little effect on softening temps. of II.

ACCESSION NUMBER: 1975:58334 CAPIUS

DOCUMENT NUMBER: 82:58334

TITLE: Synthesis and study of polyimides from diamines with different numbers of oxyphenylene units

AUTHOR(S): Adrova, N. A.; Dubnova, A. M.; Kuznetsov, N. P.; Koton, M. M.; Bessonov, M. I.; Simonova, G. N.

CORPORATE SOURCE: Inst. Vysokomol. Soedin., Leningrad, USSR  
SOURCE: Vysokomolekulyarnye Soedineniya, Seriya B: Kratkie Soobshcheniya (1974), 16(9), 710-12

CODEN: VYSBAI; ISSN: 0507-5483

DOCUMENT TYPE: Journal  
LANGUAGE: Russian

IT 53938-96-8 53938-97-9 53938-98-0

53938-99-1

RL: PRP (Properties)

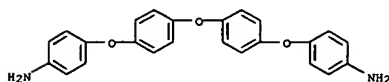
(physicomech. properties of)

RN 53938-96-8 CAPIUS

CN 1,3-Isobenzofurandione, 5,5'-oxybis-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

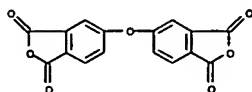
CH 1

CRN 13080-88-1  
CHF C24 H20 N2 O3



CH 2

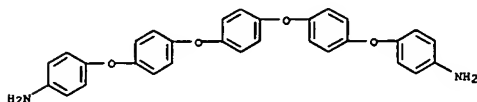
CRN 1823-59-2  
CHF C16 H6 O7



RN 53938-97-9 CAPLUS  
 CN 1,3-Isobenzofurandione, 5,5'-oxybis-, polymer with 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

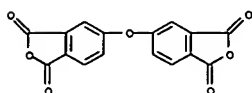
CH 1

CRN 53563-78-3  
 CMF C30 H24 N2 O4



CH 2

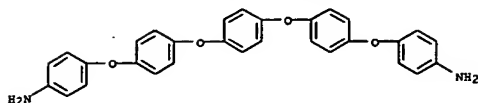
CRN 1823-59-2  
 CMF C16 H6 O7



RN 53938-98-0 CAPLUS  
 CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

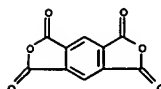
CH 1

CRN 53563-78-3  
 CMF C30 H24 N2 O4



CH 2

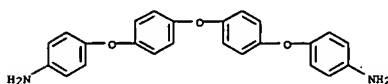
CRN 89-32-7  
 CMF C10 H2 O6



RN 53938-99-1 CAPLUS  
 CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

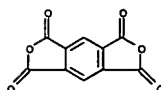
CH 1

CRN 13080-88-1  
 CMF C24 H20 N2 O3



CH 2

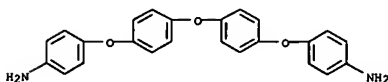
CRN 89-32-7  
 CMF C10 H2 O6



L42 ANSWER 223 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
 GI For diagram(s), see printed CA issue.  
 AB In the polyimides I (m = 1-4), increasing the length of the phenylene oxide unit (from m = 1 to m = 4) had little influence on the strength of I, but elongation of the polymer decreased from 10 to 4%. A simultaneous increase in modulus of elasticity was attributed to different degrees of crystallinity in the investigated polymers. Increasing the length of the ether unit also led to lowered softening temps., but the thermal stability of I was little changed. The amines 4,4'-diaminotetra(p-phenylene oxide) (13080-88-1) and 4,4'-diaminopenta(p-phenylene oxide) [53563-78-3] were synthesized for preparing I (m = 4,5). I were prepared by 2-stage condensation.  
 ACCESSION NUMBER: 1975:43894 CAPLUS  
 DOCUMENT NUMBER: 82:43894  
 TITLE: Synthesis and study of polyester imides on the basis of diamines with a different number of phenylene oxide units  
 AUTHOR(S): Adrova, N. A.; Dubnova, A. M.; Koton, M. M.; Kuznetsov, N. P.  
 CORPORATE SOURCE: Inst. Vysokomol. Soedin., Leningrad, USSR  
 SOURCE: Vysokomolekulyarnye Soedineniya, Seriya B: Kratkie Soobshcheniya (1974), 16(7), 504-6  
 CODEN: VYSBAI; ISSN: 0507-5483  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 IT 53563-77-2 53563-79-4  
 RL: PRP (Properties)  
 (phys. mech. properties of, oligoether links effect on)  
 RN 53563-77-2 CAPLUS  
 CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis(benzenamine) (9CI) (CA INDEX NAME)

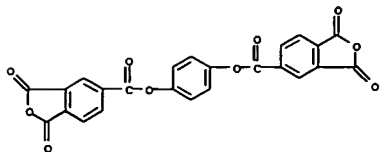
CH 1

CRN 13080-88-1  
 CMF C24 H20 N2 O3



CH 2

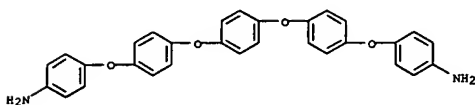
CRN 2770-49-2  
 CMF C24 H10 O10



RN 53563-79-4 CAPLUS  
 CN 5-Isobenzofuran-2-carboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

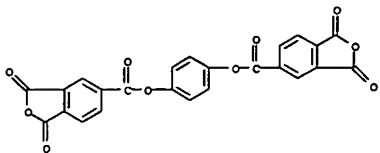
CH 1

CRN 53563-78-3  
 CHF C30 H24 N2 O4



CH 2

CRN 2770-49-2  
 CHF C24 H10 O10



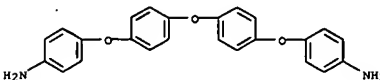
IT 13080-88-1P 53563-78-3P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and polymerization of)  
 RN 13080-88-1 CAPLUS

L42 ANSWER 224 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN

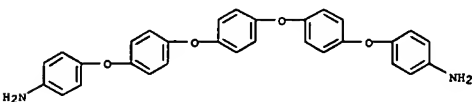
GI For diagram(s), see printed CA Issue.  
 AB Reaction of aromatic diamines (I, Z = O, n = 1-4, and Z = S, n = 1) with dianhydrides [II, Z = direct bond, O, C, p-C6H4(O2C)2, m-C6H4(O2C)2, o-C6H4(O2C)2, and pyromellitic dianhydride [89-32-7], meso-1,2,3,4-butanetetracarboxylic dianhydride (III) [17309-39-6], and 1-cis-2-cis-3-cis-4-cis-cyclopentanetetracarboxylic dianhydride (IV) [4802-47-5]] yielding poly(amide-acids) and model compds.  
 4-phenoxyaniline  
 (VI) [139-59-3] and phthalic anhydride [85-44-9] followed 2nd order kinetics. The reaction rate increased with increasing basicity of the amines and electrophilicity of the carbonyl carbons of the anhydride groups. Reaction of III and IV with V or 4,4'-oxydianiline (I, Z = O, n = 1) [101-80-4] consisted of a fast step that was followed by a slow one. The former one corresponded to the opening of the strained anhydride ring in the dianhydrides.

ACCESSION NUMBER: 1975:17176 CAPLUS  
 DOCUMENT NUMBER: 82:17176  
 TITLE: Formation of polyamido acids  
 AUTHOR(S): Koton, M. M.; Kudryavtsev, V. V.; Adrova, N. A.; Kalnina, K.; Dubnova, A. M.; Svetlichnyi, V. M.  
 CORPORATE SOURCE: Inst. Vysokomol. Soedin., Leningrad, USSR  
 SOURCE: Vysokomolekulyarnye Soedineniya, Seriya A (1974), 16(9), 2081-6  
 CODEN: VYSAAF; ISSN: 0507-5475  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian

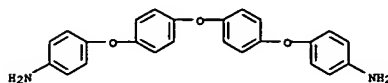
IT 13080-88-1 53563-78-3  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with dianhydrides, kinetics of)  
 RN 13080-88-1 CAPLUS  
 CN Benzenamine, 4,4'-[oxybis(4,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)



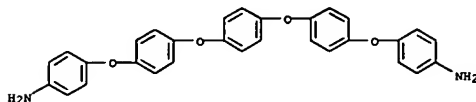
RN 53563-78-3 CAPLUS  
 CN Benzenamine, 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)



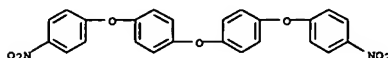
L42 ANSWER 223 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)  
 CN Benzenamine, 4,4'-[oxybis(4,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)



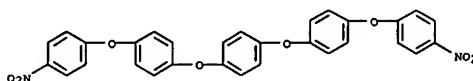
RN 53563-78-3 CAPLUS  
 CN Benzenamine, 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)



IT 51532-42-4P 53577-20-1P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and reduction of)  
 RN 51532-42-4 CAPLUS  
 CN Benzene, 1,1'-oxybis[4-(4-nitrophenoxy)]- (9CI) (CA INDEX NAME)



RN 53577-20-1 CAPLUS  
 CN Benzene, 1,4-bis[4-(4-nitrophenoxy)phenoxy]- (9CI) (CA INDEX NAME)

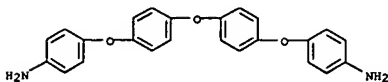


L42 ANSWER 225 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN

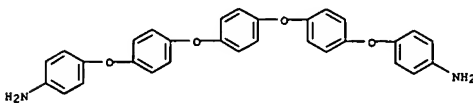
AB Hammett correlation results for acylation of RC6H4NH2 (I: R = m-NO2, p-Br, H, p-PhO, p-Me) by pyromellitic dianhydride (II) and by 3,3',4,4'-benzophenonetetracarboxylic dianhydride (III) were as follows (acylating agent, solvent, ρ given): II, DMF, -3.4; III, AcNMe2, -3.4; III, DMF, -3.32; III, N-methyl-2-pyrrolidone, -3.0. Hammett σ consts. were determined for several complex (aminophenyl)-containing R groups by acylation of addnl. I. The pK1 of these diamines was linearly related to the σ consts.

ACCESSION NUMBER: 1974:551307 CAPLUS  
 DOCUMENT NUMBER: 81:151307  
 TITLE: Reactivity of aromatic diamines in the formation of polyamido acids  
 AUTHOR(S): Svetlichnyi, V. M.; Kudryavtsev, V. V.; Adrova, N. A.; Koton, M. M.  
 CORPORATE SOURCE: Inst. Vysokomol. Soedin., Leningrad, USSR  
 SOURCE: Zhurnal Organicheskoi Khimii (1974), 10(9), 1896-900  
 CODEN: ZORKAE; ISSN: 0514-7492  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian

IT 13080-88-1 53563-78-3  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (acylation of, by dianhydrides, kinetics of)  
 RN 13080-88-1 CAPLUS  
 CN Benzenamine, 4,4'-[oxybis(4,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)



RN 53563-78-3 CAPLUS  
 CN Benzenamine, 4,4'-[1,4-phenylenebis(oxy-4,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)

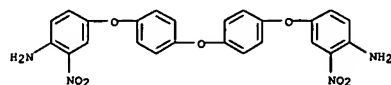


L42 ANSWER 226 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB The tetramines (I, Ar = m-, or p-C6H4, or p,p'-C6H4RC6H4, where R = a single bond, CO, CH2, SO2, or CMe2), were prepared from diols, halonitroacetanilide, or bromonitroaniline, and treated with bis(glyoxalylphenyl) ethers, to give polyquinoxalines, polyquinoxalines, and polybenzimidazoles. To obtain I the diols were nitrated, reduced, acetylated, nitrated, hydrolyzed, and reduced; the amidohalonitroaromatic compound treated with a metal diphenoxide and reduced; and the aminohalonitro aromatic compds. treated with the diphenoxide, hydrolyzed, and reduced. Thus, 51.6 g resorcinol in 2 l. Me2SO was treated with 52.6 g powdered K, heated 20-30 min at 90-110.deg. with distillation, mixed with 423 g 5-bromo-2-nitroacetanilide [50863-02-0] over 15 min, and heated 8 hr at 130-40.deg., distilled under reduced pressure to remove 1.8 l. solvent, and the residue added to 8 l. water to precipitate 160 g 1,3-bis(3-acetamido-4-nitrophenoxy)benzene [50863-03-1], 110 g of which was suspended in 2 l. 95% EtOH, heated at 80-110.deg. with dropwise addition of a solution of 29 g Na2CO3 in 120 ml. water, heated 10 addnl. min., cooled to precipitate 83.5 g 1,3-bis(3-amino-4-nitrophenoxy)benzene [50863-04-2], 72 g of which was added to 380g SnCl2.2H2O in 1.3 l. concentrated HCl, heated 4 hr at .sim. 110.deg., cooled, and added to 384 g Na2CO3 in 2 l. water to give 60 g crude product which was crystallized from BuOH to give 50 g 1,3-bis(3,4-diaminophenoxy)benzene (I, Ar = m-C6H4) (II) [19737-49-6].  
 II (0.967 g) suspended in 6 ml m-cresol was mixed with 0.9549 g bis(4-glyoxalyl phenyl) ether dihydrate and 3 ml. m-cresol, stirred 1 hr at room temperature and 1 hr at 100.deg. to give 1,3-bis(3,4-diaminophenoxy)benzene-bis(4-glyoxalylphenyl) ether copolymer [50862-51-6], as a polyquinoxaline of inherent viscosity (m-cresol) 1.15 dl/g. A cast film of the polymer was flexible and tough, and completely soluble in CHCl3, C2H2Cl2, o-Cl2C6H4, m-cresol, and chlorophenols. On heating 1 hr at 375.deg., the film had inherent viscosity (in concentrated H2SO4) > 1.6 dl/g.  
 ACCESSION NUMBER: 1974:96565 CAPLUS  
 DOCUMENT NUMBER: 80:96565  
 TITLE: Aromatic tetramines  
 INVENTOR(S): Rabilloud, Guy; Sillion, Bernard  
 PATENT ASSIGNEE(S): Institut Francais du Petrole, des Carburants et Lubrifiants  
 SOURCE: Fr., 19 pp.  
 CODEN: FRXXAK  
 DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

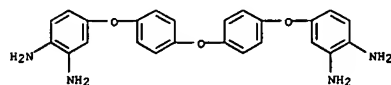
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2161149	A5	19730706	FR 1971-40861	19711115
PRIORITY APPLN. INFO.:			FR 1971-40861	A 19711115

IT 13080-88-1P 51532-42-4P 51532-43-5P  
 51532-44-6P 51532-45-7P 51532-46-8P

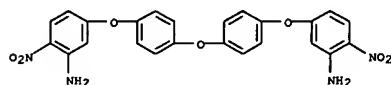
L42 ANSWER 226 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



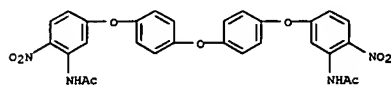
RN 51532-46-8 CAPLUS  
 CN 1,2-Benzenediamine, 4,4'-[oxybis(4,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)



RN 51532-47-9 CAPLUS  
 CN Benzenamine, 3,3'-[oxybis(4,1-phenyleneoxy)]bis[6-nitro- (9CI) (CA INDEX NAME)



RN 51585-70-7 CAPLUS  
 CN Acetamide, N,N'-[oxybis(4,1-phenyleneoxy(6-nitro-3,1-phenylene)]bis- (9CI) (CA INDEX NAME)

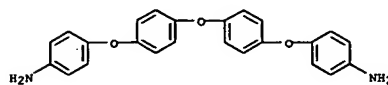


IT 51555-52-3P 51555-54-3P 51555-55-6P  
 RL: PREP (Preparation)  
 (preparation of soluble)  
 RN 51555-52-3 CAPLUS  
 CN Benzenecetaldehyde, 4,4'-[oxybis(alpha-oxo-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[1,2-benzenediamine] (9CI) (CA INDEX NAME)

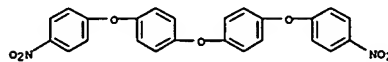
CM 1

CRN 51532-46-8

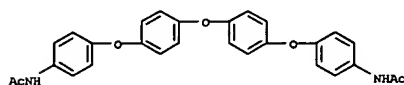
L42 ANSWER 226 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)  
 51532-47-9P 51585-70-7P  
 RL: PREP (Preparation)  
 (prepn. of)  
 RN 13080-88-1 CAPLUS  
 CN Benzenamine, 4,4'-[oxybis(4,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)



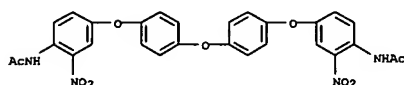
RN 51532-42-4 CAPLUS  
 CN Benzene, 1,1'-oxybis[4-(4-nitrophenoxy)]- (9CI) (CA INDEX NAME)



RN 51532-43-5 CAPLUS  
 CN Acetamide, N,N'-[oxybis(4,1-phenyleneoxy-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)

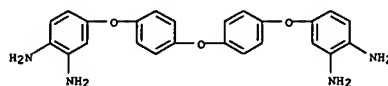


RN 51532-44-6 CAPLUS  
 CN Acetamide, N,N'-[oxybis(4,1-phenyleneoxy(2-nitro-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



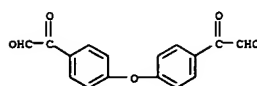
RN 51532-45-7 CAPLUS  
 CN Benzenamine, 4,4'-[oxybis(4,1-phenyleneoxy)]bis[2-nitro- (9CI) (CA INDEX NAME)

L42 ANSWER 226 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)  
 CHF C24 H22 N4 O3



CM 2

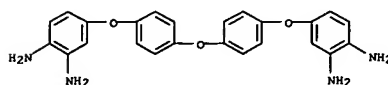
CRN 2489-92-1  
 CHF C16 H10 O5



RN 51555-54-5 CAPLUS  
 CN Ethanedione, 1,1'-[oxybis(4,1-phenylene)]bis[2-phenyl-, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[1,2-benzenediamine] (9CI) (CA INDEX NAME)

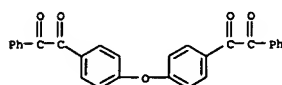
CM 1

CRN 51532-46-8  
 CHF C24 H22 N4 O3



CM 2

CRN 21454-19-3  
 CHF C28 H18 O5

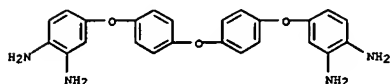


L42 ANSWER 226 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

RN 51555-55-6 CAPLUS  
CN Benzeneacetic acid, 4,4'-oxybis[α-oxo-, diethyl ester, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[1,2-benzenediamine] (9CI) (CA INDEX NAME)

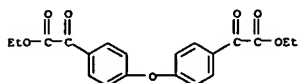
CH 1

CRN 51532-46-8  
CMF C24 H22 N4 O3



CH 2

CRN 29301-45-9  
CMF C20 H18 O7



L42 ANSWER 227 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
AB Poly(arylene oxides) were produced from monomers, X-Ar-OH (I, X = Cl, Br, I, Ar = 2-10 phenylene groups bonded directly or through ether linkages), by in situ salt formation followed by polycondensation. Thus, 4,4'-dibromobiphenyl [92-86-4] was treated with p-methoxyphenol [150-76-5] to form 4-(p-bromophenyl)-4'-methoxydiphenyl ether [41189-33-7], which yielded 4-(p-bromophenyl)-4'-hydroxydiphenyl ether (II) [41189-34-8] (I, X = Br, Ar = 4,4'-biphenyllyleneoxy-p-phenylene), by heating in the presence of pyridine hydrochloride. II was polymerized in the presence of NaOH and CuO to form thermally stable poly(oxy-p-phenyleneoxy-4,4'-biphenyllylene) [41189-41-7], m.p. 360-70 deg., inherent viscosity 0.29 in H2SO4.

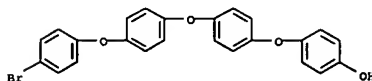
ACCESSION NUMBER: 1973:443062 CAPLUS  
DOCUMENT NUMBER: 79:43062  
TITLE: Film-forming poly(arylene oxides)  
INVENTOR(S): Vogel, Herward A.  
SOURCE: U.S., 7 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3736291	A	19730529	US 1971-189137	19711014
PRIORITY APPLN. INFO.:			US 1963-269140	A2 19630329
			US 1966-567367	A1 19660725

IT 31343-71-2  
RL: USES (Uses)  
(heat-resistant)  
RN 31343-71-2 CAPLUS  
CN Phenol, p-[p-[p-(p-bromophenoxy)phenoxy]phenoxy]-, polymers (8CI) (CA INDEX NAME)

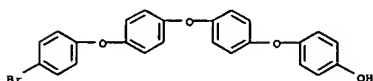
CH 1

CRN 13320-50-8  
CMF C24 H17 Br O4

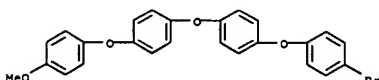


IT 13320-50-8P 42203-41-8P 42311-10-4P  
RL: PREP (Preparation)  
(preparation of)  
RN 13320-50-8 CAPLUS  
CN Phenol, 4-[4-[4-(4-bromophenoxy)phenoxy]phenoxy]- (9CI) (CA INDEX NAME)

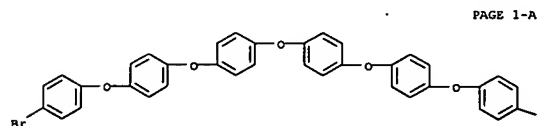
L42 ANSWER 227 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 42203-41-8 CAPLUS  
CN Benzene, 1-(4-(4-bromophenoxy)-4-[4-(4-methoxyphenoxy)phenoxy]- (9CI) (CA INDEX NAME)



RN 42311-10-4 CAPLUS  
CN Phenol, 4-[4-[4-[4-(4-bromophenoxy)phenoxy]phenoxy]phenoxy]phenoxy]- (9CI) (CA INDEX NAME)



PAGE 1-A

PAGE 1-B

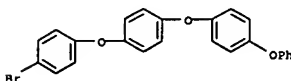
OH

L42 ANSWER 228 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
AB Silylation of aromatic polyphenyl ethers with Me3SiCl, Me2SiPhCl, and MeSiPh2Cl gave products such as PhOC6H4SiMe2Ph, PhOC6H4OC6H4SiMe3, and [PhOC6H4OC6H4SiMe2]2O, with improved low-temperature fluidity without change of thermal stability.

ACCESSION NUMBER: 1973:159742 CAPLUS  
DOCUMENT NUMBER: 78:159742  
TITLE: Silylated polyphenyl ethers. Their preparation and some physical properties  
AUTHOR(S): Fink, Walter  
CORPORATE SOURCE: Monsanto Res. S.A., Zurich, Switz.  
SOURCE: Helvetica Chimica Acta (1973), 56(1), 355-63  
CODEN: HCACAV; ISSN: 0018-019X  
DOCUMENT TYPE: Journal  
LANGUAGE: German

IT 41318-74-5  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(Grignard reaction of, with chlorosilanes)

RN 41318-74-5 CAPLUS  
CN Benzene, 1-(4-(4-bromophenoxy)-4-(4-phenoxyphenoxy)- (9CI) (CA INDEX NAME)





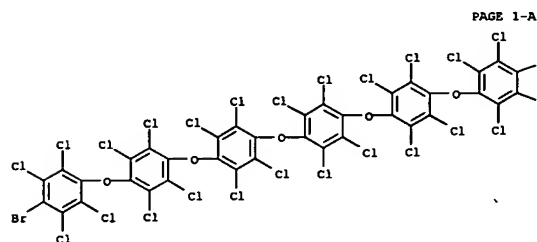
L42 ANSWER 229 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
GI For diagram(s), see printed CA Issue.  
AB The controlled oxidation of perhalo p-bromophenols (I), (II), and (III) gives

the corresponding perhalo polyethers (IV); the perchloro 4-aryloxycyclohexa-2,5-dienone (V) is obtained from pentachlorophenol (VI). Similarly, VII gives VIII and 4-chloro-2,3,5,6-tetrabromophenol gives IX.

ACCESSION NUMBER: 1971:111698 CAPLUS  
DOCUMENT NUMBER: 74:111698  
TITLE: Oxidation of pentahalo benzenic phenols  
AUTHOR(S): Deniville, Leon; Lampel, Alfred  
CORPORATE SOURCE: Lab. Chim. Text. Tinctoriale, Conserv. Natl. Aris  
Metiers, Paris, Fr.  
SOURCE: Comptes Rendus des Seances de l'Academie des  
Sciences, Serie C: Sciences Chimiques (1971), 272(7), 653-6  
CODEN: CHDCAQ; ISSN: 0567-6541

DOCUMENT TYPE: Journal  
LANGUAGE: French  
IT 31404-36-1P 31404-38-3P 31581-40-5P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 31404-36-1 CAPLUS  
CN Phenol, 4-[4-[4-[4-(4-bromo-2,3,5,6-tetrachlorophenoxy)-2,3,5,6-tetrachlorophenoxy]-2,3,5,6-tetrachlorophenoxy]-2,3,5,6-tetrachlorophenoxy]-2,3,5,6-tetrachlorophenoxy] (8CI) (CA INDEX NAME)



PAGE 1-A

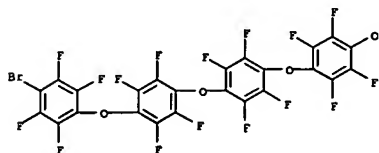
PAGE 1-B

OH  
Cl

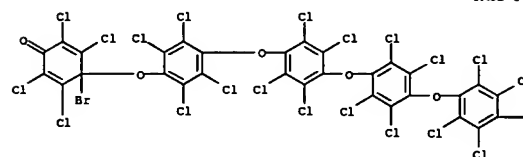
L42 ANSWER 229 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

L42 ANSWER 229 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

RN 31404-38-3 CAPLUS  
CN Phenol, 4-[4-[4-(4-bromo-2,3,5,6-tetrafluorophenoxy)-2,3,5,6-tetrafluorophenoxy]-2,3,5,6-tetrafluorophenoxy]-2,3,5,6-tetrafluorophenoxy] (8CI) (CA INDEX NAME)

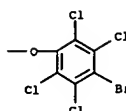


RN 31581-40-5 CAPLUS  
CN 2,5-Cyclohexadien-1-one, 4-bromo-4-[4-[4-[4-(4-bromo-2,3,5,6-tetrachlorophenoxy)-2,3,5,6-tetrachlorophenoxy]-2,3,5,6-tetrachlorophenoxy]-2,3,5,6-tetrachlorophenoxy]-2,3,5,6-tetrachlorophenoxy] (8CI) (CA INDEX NAME)



PAGE 1-A

PAGE 1-B



L42 ANSWER 230 OF 231 CAPLUS COPYRIGHT 2005 ACS on STN  
AB High-melting polyamides containing ether groups, useful in the preparation of filaments, fibers, and films having good mech. properties and good heat stability, are prepared. Thus, 20.3 parts isophthaloyl chloride was added slowly to 36.8 parts 4,4'-bis(p-aminophenoxy)biphenyl in 150 parts N-methylpyrrolidinone at 0°. The mixture was stirred 4 hrs. while allowing the temperature of the viscous solution to rise slowly to ambient temperature.

The solution was diluted with 200 parts HCONMe2 and the polymer precipitated by pouring the solution into vigorously stirred water. After filtering, washing, and drying, the resulting polyamide melted >360° and had an inherent viscosity of 1.18 (0.5% in N-methylpyrrolidinone at 25°). Similarly used were 4,4'-sulfonyldibenzoyl chloride, terephthaloyl chloride, 2,2-bis[4-(p-aminophenoxy)phenyl]propane, 4,4'-bis(p-aminophenoxy)diphenyl sulfone, 4,4'-bis(p-aminophenoxy)diphenyl ether, 2,2-bis[4-(2-chloro-4-aminophenoxy)phenyl]propane, 1,4-bis(2-chloro-4-aminophenoxy)benzene, 1,4-bis(4-aminophenoxy)benzene, 3-chloro-4,4'-bis(p-aminophenoxy)diphenyl sulfone, and 3,3'-dichloro-4,4'-bis(p-aminophenoxy)diphenyl sulfone.

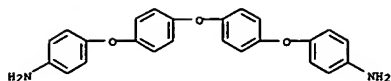
ACCESSION NUMBER: 1969:413559 CAPLUS  
DOCUMENT NUMBER: 71:13559  
TITLE: High-melting polyamides containing ether groups  
PATENT ASSIGNEE(S): Farbenfabriken Bayer A.-G.  
SOURCE: Fr., 5 pp.  
CODEN: FRGGAK  
DOCUMENT TYPE: Patent  
LANGUAGE: French  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 1537385		19680823		
DE 1595681			DE	
GB 1154816			GB	
US 3505288		19700000	US	
PRIORITY APPLN. INFO.:			DE	19660919
			DE	19670204

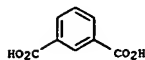
IT 26796-88-3P 26913-01-9P  
RL: PREP (Preparation)  
(preparation of)  
RN 26796-88-3 CAPLUS  
CN 1,3-Benzenedicarboxylic acid, polymer with 4,4'-[oxybis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CH 1

CRN 13080-88-1  
CHF C24 H20 N2 O3



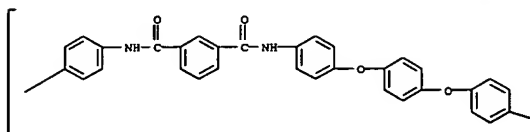
CM 2

CRN 121-91-5  
CHF C8 H6 O4

RN 26913-01-9 CAPLUS

CN Poly(oxy-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenyleneiminocarbonyl-1,3-phenyleneiminocarbonylimino-1,4-phenylene) (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

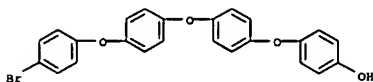


IT 13320-50-8P

RL: PREP (Preparation)  
(preparation of)

RN 13320-50-8 CAPLUS

CN Phenol, 4-[4-[4-(4-bromophenoxy)phenoxy]phenoxy]- (9CI) (CA INDEX NAME)



AB The preparation and polymerization of both polynuclear and mononuclear phenylene oxide

monomers is described. The polymers, formed in the presence of a Cu catalyst and total absence of O and H2O, have >80% p-phenylene oxide units, m. 220-95°C., inherent viscosities >0.3 (1% solution in H2SO4), total solubility in Ph2O at 225°C. (5% polymer solution), and can be formed into high-strength, orientable fibers and films. Thus, a mixture of 4-bromo-4'-hydroxydiphenyl ether 53.0, powdered NaOH 8.3, Ph2O 120, and

CuO

0.04 g. was purged with N and heated 30 min. at 200-50°C./20 mm. to remove H2O and 20 ml. Ph2O. The pressure was equalized and temperature increased to 270-80°C. After 6 hrs., a viscous melt (containing suspended NaBr) was obtained, 100 g. boiling PhOH added, and the mixture filtered and precipitated in 1500 ml. 130°C. Me2NCHO to yield 32% poly(p-phenylene oxide) (I), which was washed in acetone and H2O and dried. I, m. 290°C., inherent viscosity 0.35, glass transition 85-90°C., was compression molded (500 psi., 580-600°F.) into a tough, flexible, transparent film with 5000-7000 psi. tensile strength, 6-7% elongation, and d. 1.27. Similar polymers were prepared from 4-(p-bromophenoxy)-4'-hydroxydiphenyl ether, 4-(p-bromophenoxy)-4'-(p-hydroxyphenoxy)diphenyl ether, and from K O-, p-, and m-chlorophenolate.

ACCESSION NUMBER: 1967:56009 CAPLUS

DOCUMENT NUMBER: 66:56009

TITLE: Phenylene oxide polymers

PATENT ASSIGNEE(S): Minnesota Mining and Manufacturing Co.

SOURCE: Brit., 19 pp.

CODEN: BROGAA

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 1053053		19661230	GB	
DE 1520371			DE	
PRIORITY APPLN. INFO.:			US	19630320

IT 31343-71-2P

RL: IMF (Industrial manufacture); PREP (Preparation)  
(manufacture of)

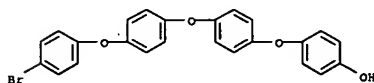
RN 31343-71-2 CAPLUS

CN Phenol, p-[p-[p-(p-bromophenoxy)phenoxy]phenoxy]-, polymers (8CI) (CA INDEX NAME)

CM 1

CRN 13320-50-8

CHF C24 H17 Br O4



=>

=> fil reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

1164.08

3126.28

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

-169.36

-216.81

FILE 'REGISTRY' ENTERED AT 20:14:18 ON 12 JAN 2005

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2005 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 10 JAN 2005 HIGHEST RN 811411-12-8

DICTIONARY FILE UPDATES: 10 JAN 2005 HIGHEST RN 811411-12-8

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

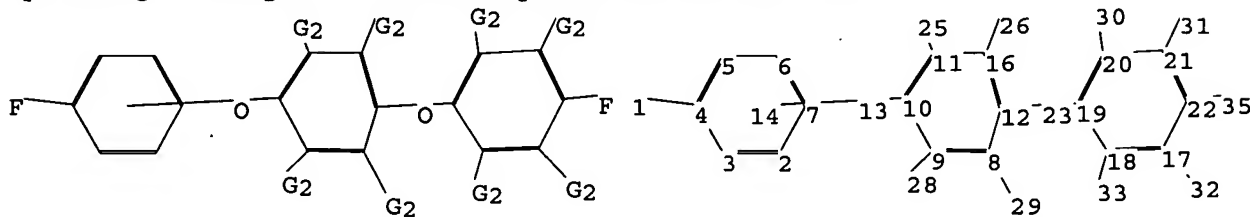
Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>

Uploading C:\Program Files\Stnexp\Queries\10718532.str



chain nodes :

1 13 23 25 26 28 29 30 31 32 33 35

ring nodes :

2 3 4 5 6 7 8 9 10 11 12 16 17 18 19 20 21 22

chain bonds :

1-4 8-29 9-28 10-13 11-25 12-23 16-26 17-32 18-33 19-23 20-30 21-31  
22-35

ring bonds :

2-3 2-7 3-4 4-5 5-6 6-7 8-9 8-12 9-10 10-11 11-16 12-16 17-18 17-22  
18-19 19-20 20-21 21-22

exact/norm bonds :

8-29 9-28 10-13 11-25 12-23 16-26 17-32 18-33 19-23 20-30 21-31

exact bonds :

1-4 22-35

normalized bonds :

2-3 2-7 3-4 4-5 5-6 6-7 8-9 8-12 9-10 10-11 11-16 12-16 17-18 17-22  
18-19 19-20 20-21 21-22

G1:N,X

G2:X,Ak,H

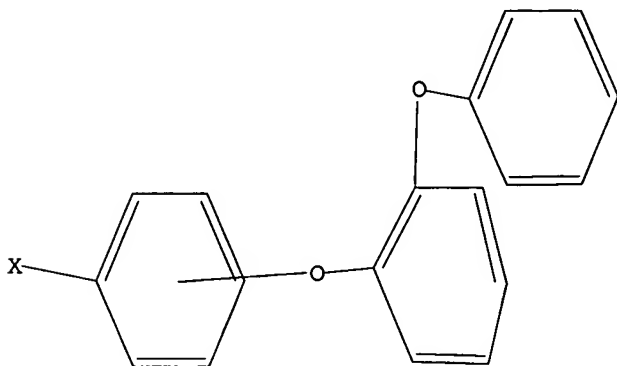
Match level :

1:CLASS 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom  
11:Atom 12:Atom 13:CLASS 14:CLASS 16:CLASS 17:Atom 18:Atom 19:Atom 20:Atom  
21:Atom 22:Atom 23:CLASS 25:CLASS 26:CLASS 28:CLASS 29:CLASS 30:CLASS  
31:CLASS 32:CLASS 33:CLASS 35:CLASS

L43 STRUCTURE UPLOADED

=> d query

L43 STR



G1 N,X

Structure attributes must be viewed using STN Express query preparation.

=> s l43

SAMPLE SEARCH INITIATED 20:16:31 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 15801 TO ITERATE

6.3% PROCESSED 1000 ITERATIONS  
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
SEARCH TIME: 00.00.01

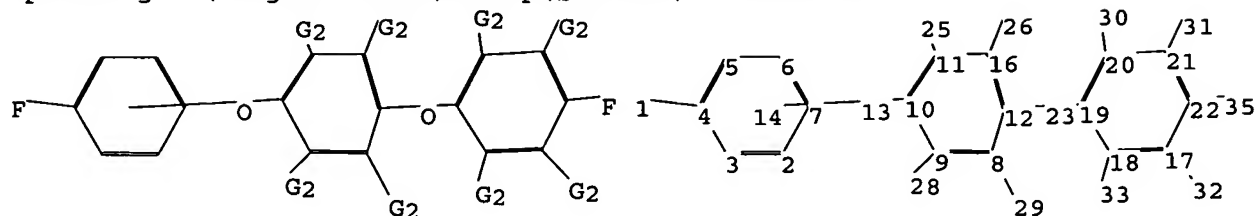
1 ANSWERS

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 308493 TO 323547  
PROJECTED ANSWERS: 78 TO 554

L44 1 SEA SSS SAM L43

=>

Uploading C:\Program Files\Stnexp\Queries\10718532.str



chain nodes :

1 13 23 25 26 28 29 30 31 32 33 35

ring nodes :

2 3 4 5 6 7 8 9 10 11 12 16 17 18 19 20 21 22

chain bonds :

1-4 8-29 9-28 10-13 11-25 12-23 16-26 17-32 18-33 19-23 20-30 21-31  
22-35

ring bonds :

2-3 2-7 3-4 4-5 5-6 6-7 8-9 8-12 9-10 10-11 11-16 12-16 17-18 17-22  
18-19 19-20 20-21 21-22

exact/norm bonds :

8-29 9-28 10-13 11-25 12-23 16-26 17-32 18-33 19-23 20-30 21-31

exact bonds :

1-4 22-35

normalized bonds :

2-3 2-7 3-4 4-5 5-6 6-7 8-9 8-12 9-10 10-11 11-16 12-16 17-18 17-22  
18-19 19-20 20-21 21-22

G1:N,X

G2:X,Ak,H

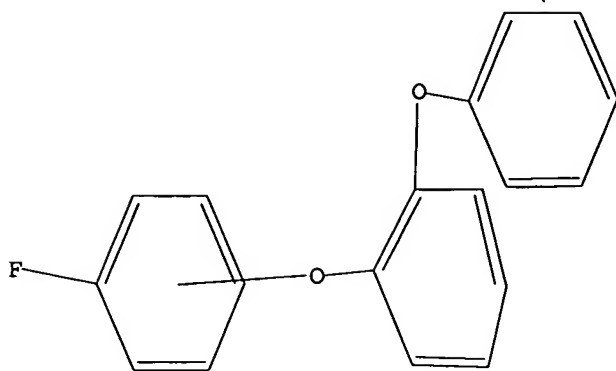
Match level :

1:CLASS 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom  
11:Atom 12:Atom 13:CLASS 14:CLASS 16:CLASS 17:Atom 18:Atom 19:Atom 20:Atom  
21:Atom 22:Atom 23:CLASS 25:CLASS 26:CLASS 28:CLASS 29:CLASS 30:CLASS  
31:CLASS 32:CLASS 33:CLASS 35:CLASS

L45 STRUCTURE UPLOADED

=> d query

L45 STR



G1 N,X

Structure attributes must be viewed using STN Express query preparation.

=> s l45

SAMPLE SEARCH INITIATED 20:17:08 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 551 TO ITERATE

100.0% PROCESSED 551 ITERATIONS 0 ANSWERS  
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 9612 TO 12428  
PROJECTED ANSWERS: 0 TO 0

L46 0 SEA SSS SAM L45

=> s l45 full

FULL SEARCH INITIATED 20:17:12 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 11844 TO ITERATE

100.0% PROCESSED 11844 ITERATIONS 23 ANSWERS  
SEARCH TIME: 00.00.01

L47 23 SEA SSS FUL L45

=> fil caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	163.05	3289.33

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-216.81

FILE 'CAPLUS' ENTERED AT 20:17:16 ON 12 JAN 2005  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)